

COUNTY	ROUTE	SECTION	TOTAL SHEETS	SHEET NO.
ADAMS	FAS 1588	04-00185-00-BR	20	1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
SURFACE TRANSPORTATION / RURAL PROGRAM
FAS ROUTE 1588 (CH #48) SECTION 04-00185-00-BR ADAMS COUNTY
PROJECT NQACRS-1588(106)
EXISTING STRUCTURE NO. 001-3026

INDEX OF SHEETS:

SHEET NO.	SHEET
1	TITLE SHEET
2	SUMMARY OF QUANTITIES GENERAL NOTES SIGNING FOR ROAD CLOSURE TYPICAL CROSS SECTIONS
3	PLAN & PROFILE
4-7	ROADWAY CROSS SECTIONS
8	BIT. SURFACE REMOVAL AND RESURFACING DETAILS END OF BRIDGE APPROACH PAVEMENT DETAIL
<u>BRIDGE SHEETS</u>	
9	BRIDGE GENERAL PLAN AND ELEVATION
10-11	TOP OF SLAB ELEVATIONS
12-13	SUPERSTRUCTURE
14	STEEL BRIDGE RAIL (SPECIAL)
15	STRUCTURAL STEEL DETAILS
16	MOMENT AND REACTION TABLES JACK AND REMOVE EXISTING BEARINGS
17	TYPE I ELASTOMERIC BEARING
18	TYPE II ELASTOMERIC BEARING
19	ANCHOR BOLT DETAILS FOR BEARINGS
20	BRIDGE APPROACH PAVEMENT (SPECIAL)

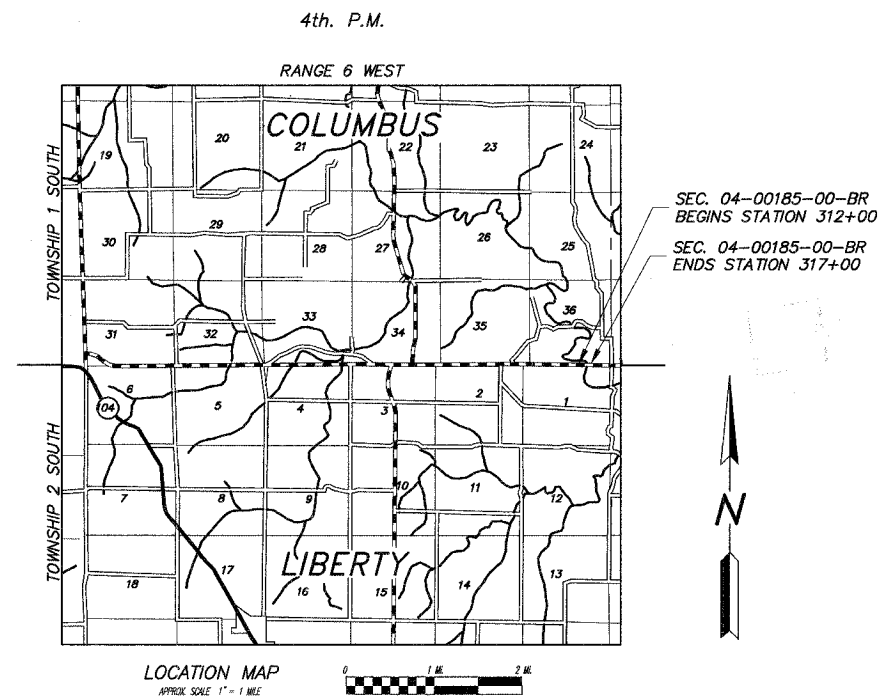
HIGHWAY STANDARDS

- STANDARD 515001-02 NAME PLATE
- STANDARD 630001-05 STEEL PLATE BEAM GUARDRAIL
- STANDARD 631026-02 TRAFFIC TERMINAL BARRIER, TYPE 5 & 5A
- STANDARD 701001-01 TRAFFIC CONTROL
- STANDARD 701006-02 TRAFFIC CONTROL
- STANDARD 701011-01 TRAFFIC CONTROL
- STANDARD 702001-05 TRAFFIC CONTROL DEVICES
- STANDARD BLR 21-6 TRAFFIC CONTROL
- STANDARD BLR 23-1 TRAFFIC TERMINAL BARRIER, TYPE 1

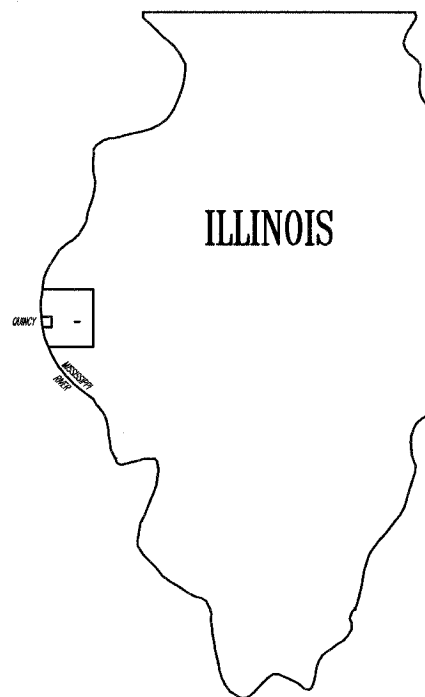
SECTION 04-00185-00-BR CONSISTS OF:

THE REMOVAL OF THE EXISTING REINF. CONCRETE DECK; THE REPAIR AND MODIFICATION OF THE EXISTING SUBSTRUCTURE AND BEARINGS; THE REPLACEMENT OF THE REINFORCED CONCRETE DECK WITH ASSOCIATED TRAFFIC BARRIER TERMINALS AND GUARD RAIL; AND THE NECESSARY ROADWAY ADJUSTMENTS.

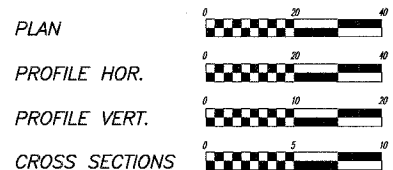
EXISTING STRUCTURE NO. 001-3026 IS A REINFORCED CONCRETE DECK ON STEEL BEAMS WITH SOLID CONC. PIERS AND ABUTMENT CAPS.



COLLECTOR - ADT 900
NET LENGTH OF IMPROVEMENT = 500.00 FT. = 0.095 MI.
STRUCTURE NO. 001-3026 LENGTH = 191.50' (BK.-BK. ABUTMENT)



PROPOSED IMPROVEMENT MARKED THUS —



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

UTILITIES:

- J.U.L.I.E. 1-800-892-0123
- ABS WATER DISTRICT CAMP POINT, IL.
- ADAMS ELECTRICAL CO-OP.....CAMP POINT, IL.

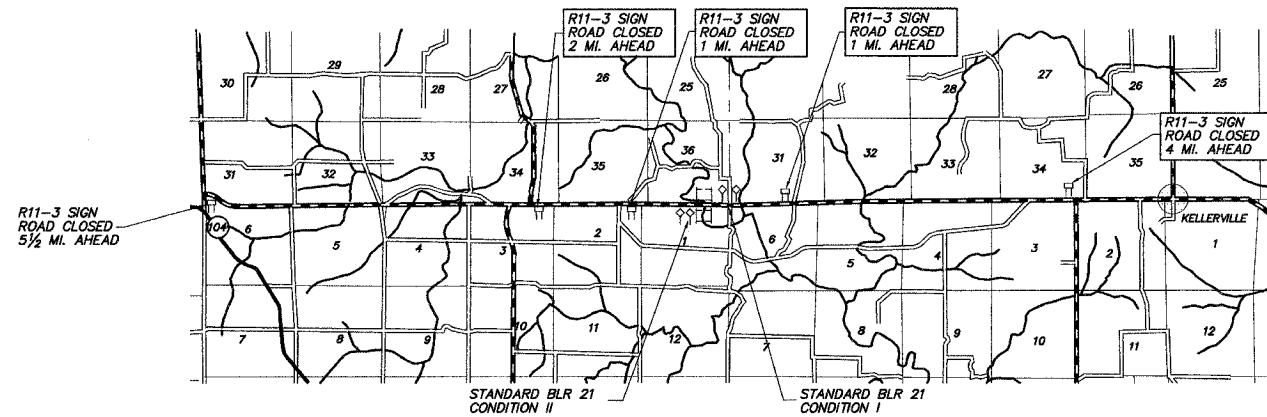
JOB NO. C-96-228-04
CONTRACT NO. 93380

SUBMITTED BY *James R. Frankenhoff* DATE *4/17/04*
JAMES R. FRANKENHOFF, P.E.
LIC. NO. 062-044792
LIC. EXPIRES 11/30/05

APPROVED <i>April 19, 2004</i> <i>Robert G. Flanagan</i> COUNTY ENGINEER	
PREPARED <i>May 21, 2004</i> <i>William E. Martens</i> DESIGN ENGINEER - CONSTRUCTION	
APPROVED <i>May 18, 2004</i> <i>William E. Martens</i> DISTRICT ENGINEER OF LOCAL ROADS AND SHEETS - 111	
APPROVED <i>May 24, 2004</i> <i>Christ H. Reed</i> DISTRICT ENGINEER	
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

COUNTY	ROUTE	SECTION NO.	SHT. NO.
ADAMS	FAS 1588	04-00185-00-BR	2 OF 20
GENERAL NOTES, TYPICAL SECTIONS			
SUMMARY OF QUANTITIES, ROAD CLOSURE			

SIGNING FOR ROAD CLOSURE

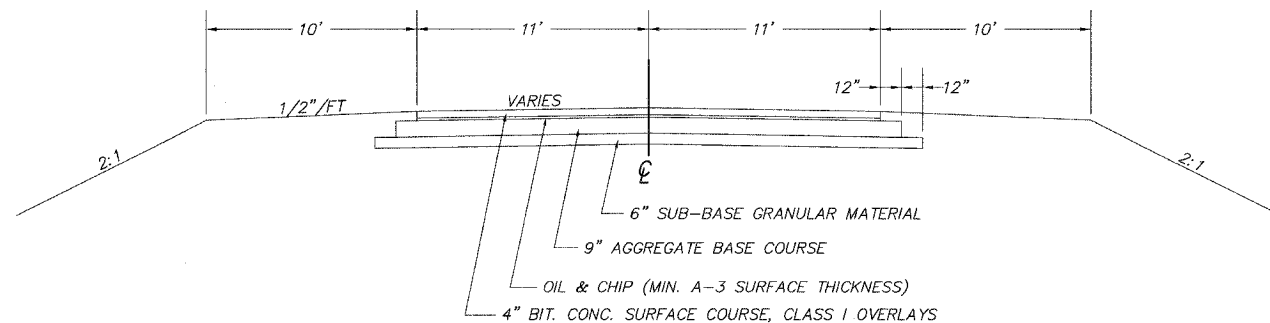


SUMMARY OF QUANTITIES

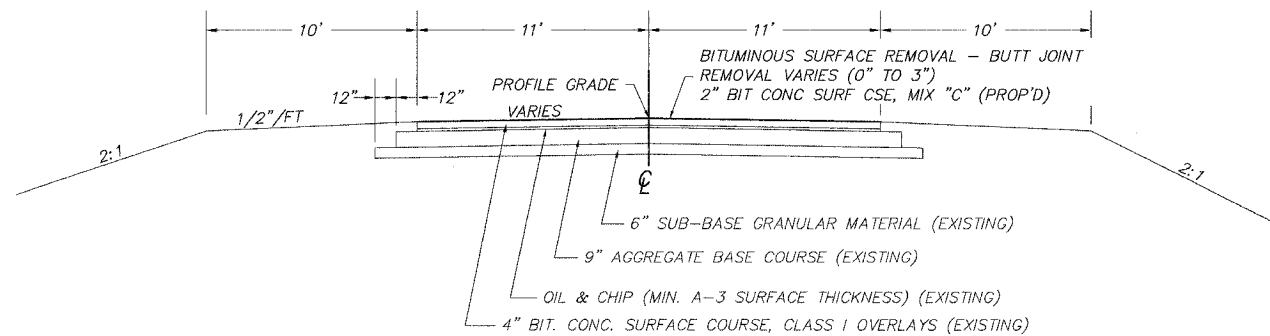
CODE NO.	QUANTITY	UNIT	ITEM
40600100	65	GALLON	BITUMINOUS MATERIALS (PRIME COAT)
40600980	293	SQ. YD.	BITUMINOUS SURFACE REMOVAL - BUTT JOINT
42001400	160	SQ. YD.	BRIDGE APPROACH PAVEMENT (SPECIAL)
50102400	3.5	CU. YD.	CONCRETE REMOVAL
50104720	1	EACH	REMOVAL OF EXISTING CONCRETE DECK
50300120	31.5	FOOT	PREFORMED JOINT SEAL 2 1/2"
50300130	31.5	FOOT	PREFORMED JOINT SEAL 4"
50300255	148.6	CU. YD.	CONCRETE SUPERSTRUCTURE
50300260	658	SQ. YD.	BRIDGE DECK GROOVING
50300300	658	SQ. YD.	PROTECTIVE COAT
50300310	6	EACH	ELASTOMERIC BEARING ASSEMBLY TYPE I
50300320	6	EACH	ELASTOMERIC BEARING ASSEMBLY TYPE II
50500505	2,718	EACH	STUD SHEAR CONNECTORS
50500715	12	EACH	JACK AND REMOVE EXISTING BEARINGS
50800205	34,370	POUND	REINFORCEMENT BARS, EPOXY COATED
50901002	383	FOOT	STEEL BRIDGE RAIL (SPECIAL)
51500100	1	EACH	NAME PLATES
63000000	100	FOOT	STEEL PLATE BEAM GUARDRAIL, TYPE A
63100075	4	EACH	TRAFFIC BARRIER TERMINAL, TYPE 5A
63200305	200	FOOT	STEEL PLATE BEAM GUARD RAIL REMOVAL
70101830	1	L. SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21
70300100	100	FOOT	SHORT TERM PAVEMENT MARKING
X4066414	75	TON	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50
X4066765	15	TON	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50
LR631020	4	EACH	TRAFFIC BARRIER TERMINAL, TYPE 1

* SPECIAL PROVISIONS
CONSTRUCTION TYPE CODE: X071-2A

EXISTING TYPICAL CROSS SECTION



PROPOSED TYPICAL CROSS SECTION



BITUMINOUS CONCRETE MIXTURE REQUIREMENTS

ITEM	AGGREGATE COMPOSITION	ASPHALT GRADE	ALLOWABLE RAP	VOIDS
LEV. BINDER, (MM) SUPERPAVE	IL-9.5	PG 64-22	20%	4.0% @ N50
SURFACE, SUPERPAVE	IL-9.5 MIX "C"	PG 64-22	15%	4.0% @ N50

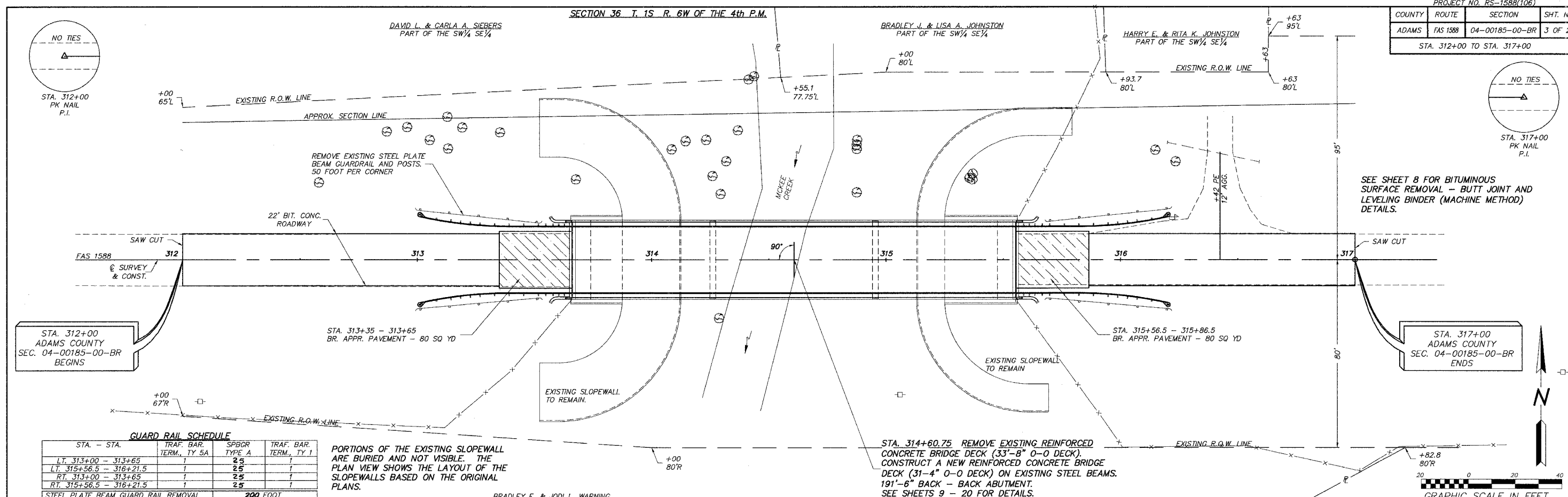
APPLICATION RATES

BITUMINOUS MATERIALS (PRIME COAT) 0.05-0.25 GAL./SQ. YD.
BITUMINOUS CONCRETE MATERIALS 112#/SQ. YD. PER 1" THICK

GENERAL NOTES

- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE MOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- PAVEMENT MARKINGS SHALL BE DONE BY THE ADAMS COUNTY HIGHWAY DEPARTMENT UPON COMPLETION.
- THE UTILITY LOCATIONS NOTED ON THE PLANS ARE APPROXIMATE AND FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF THE UTILITY.
- THE SHOULDER AND SLOPE GRADING SHOWN ON THE CROSS SECTIONS IS FOR REFERENCE ONLY. FINAL GRADING AND SHAPING OF THE SHOULDERS AND SLOPES TO BE DONE BY THE ADAMS COUNTY HIGHWAY DEPARTMENT.

COUNTY	ROUTE	SECTION	SHT. NO.
ADAMS	FAS 1588	04-00185-00-BR	3 OF 20
STA. 312+00 TO STA. 317+00			



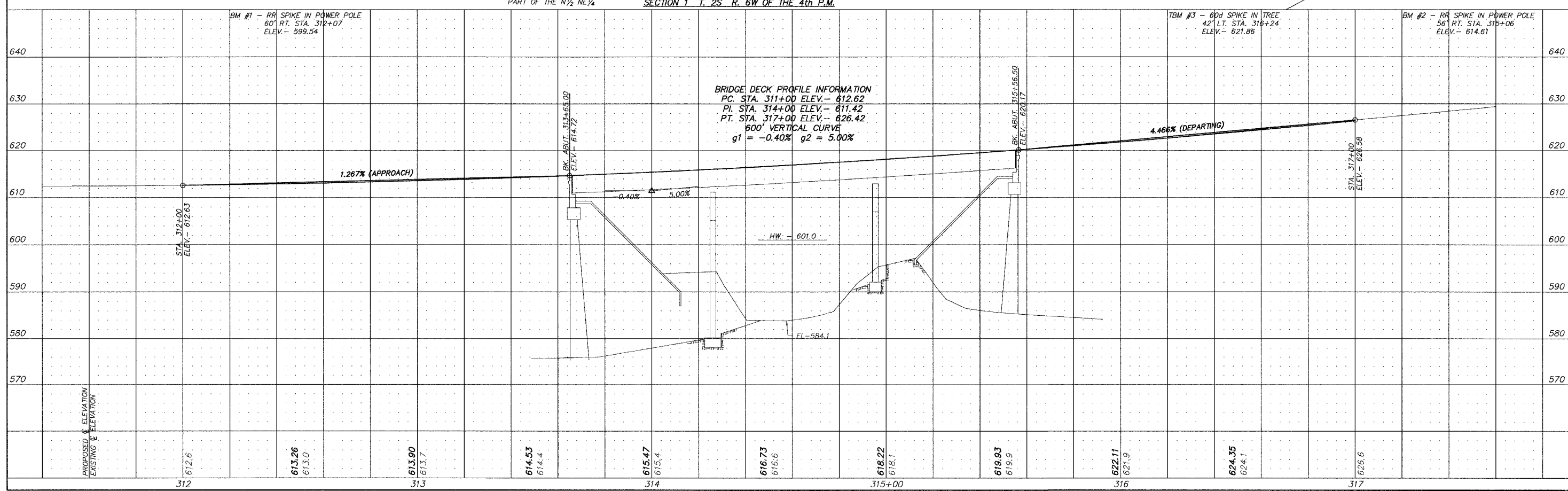
GUARD RAIL SCHEDULE

STA. - STA.	TRAF. BAR. TERM. TY SA	SPBGR TYPE A	TRAF. BAR. TERM. TY 1
LT. 313+00 - 313+65	1	2.5	1
LT. 315+56.5 - 316+21.5	1	2.5	1
RT. 313+00 - 313+65	1	2.5	1
RT. 315+56.5 - 316+21.5	1	2.5	1

STEEL PLATE BEAM GUARD RAIL REMOVAL 200 FOOT

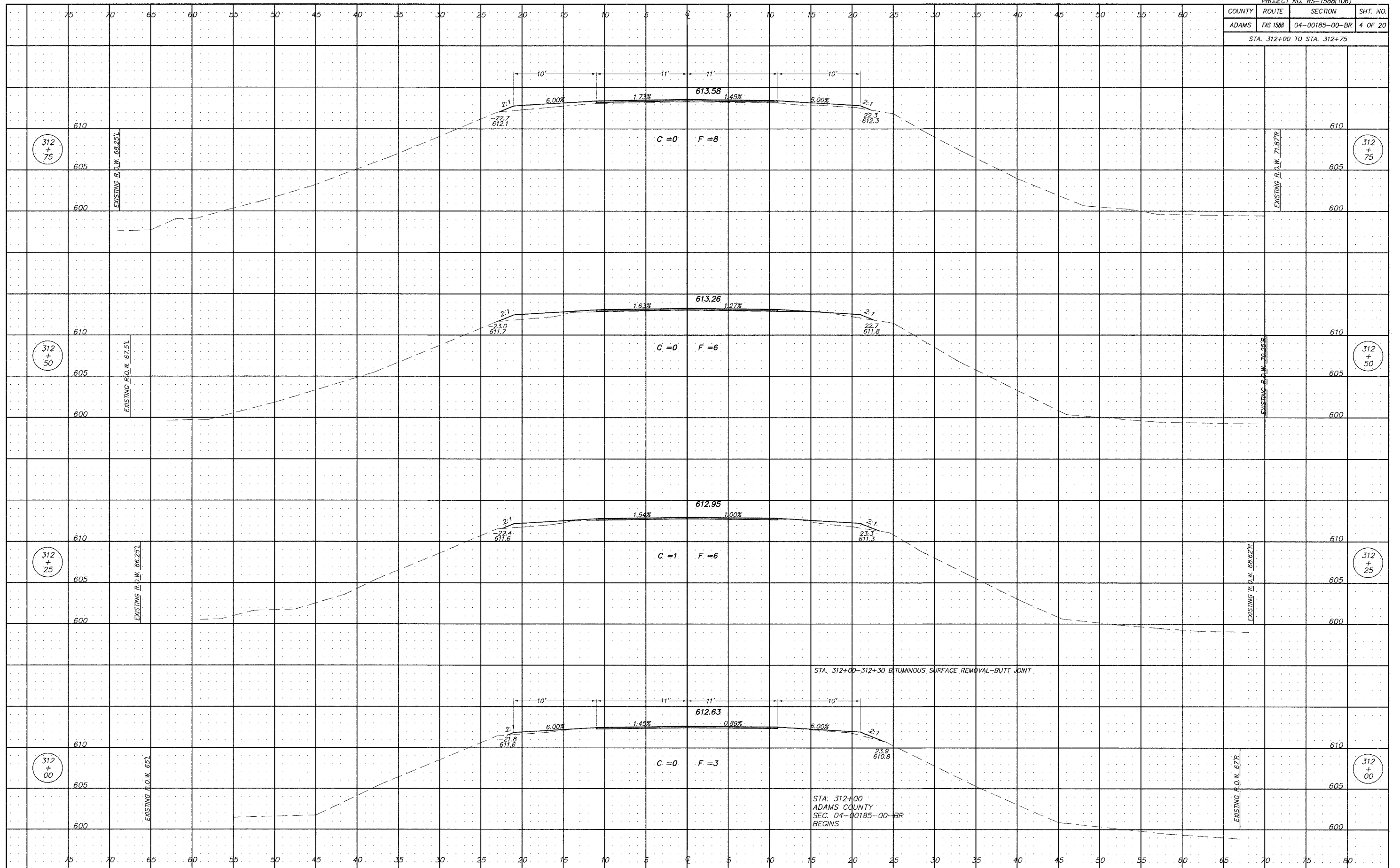
PORTIONS OF THE EXISTING SLOPEWALL ARE BURIED AND NOT VISIBLE. THE PLAN VIEW SHOWS THE LAYOUT OF THE SLOPEWALLS BASED ON THE ORIGINAL PLANS.

STA. 314+60.75 REMOVE EXISTING REINFORCED CONCRETE BRIDGE DECK (33'-8" O-O DECK). CONSTRUCT A NEW REINFORCED CONCRETE BRIDGE DECK (31'-4" O-O DECK) ON EXISTING STEEL BEAMS. 191'-6" BACK - BACK ABUTMENT. SEE SHEETS 9 - 20 FOR DETAILS.

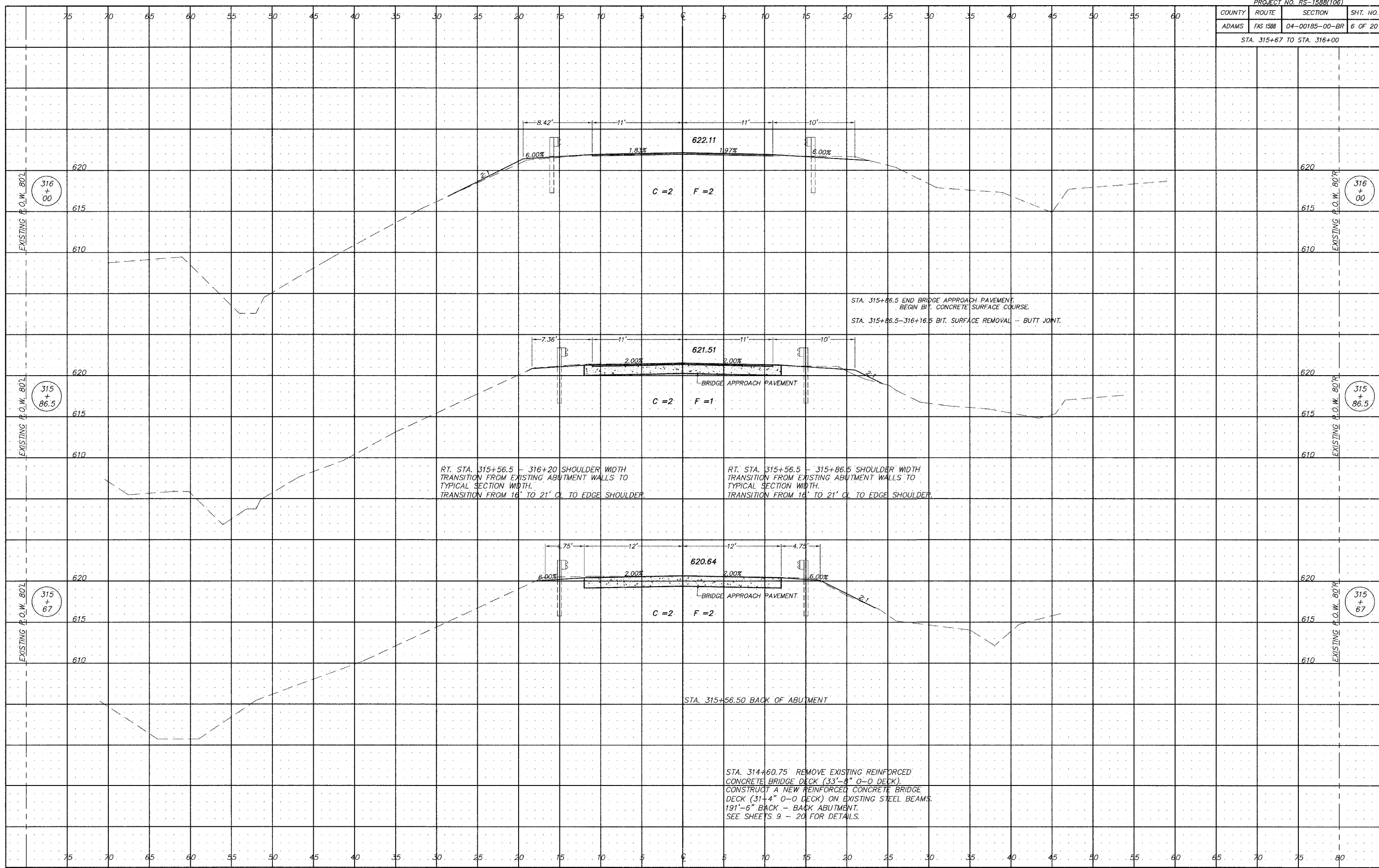


COUNTY	ROUTE	SECTION	SHT. NO.
ADAMS	FAS 1588	04-00185-00-BR	4 OF 20

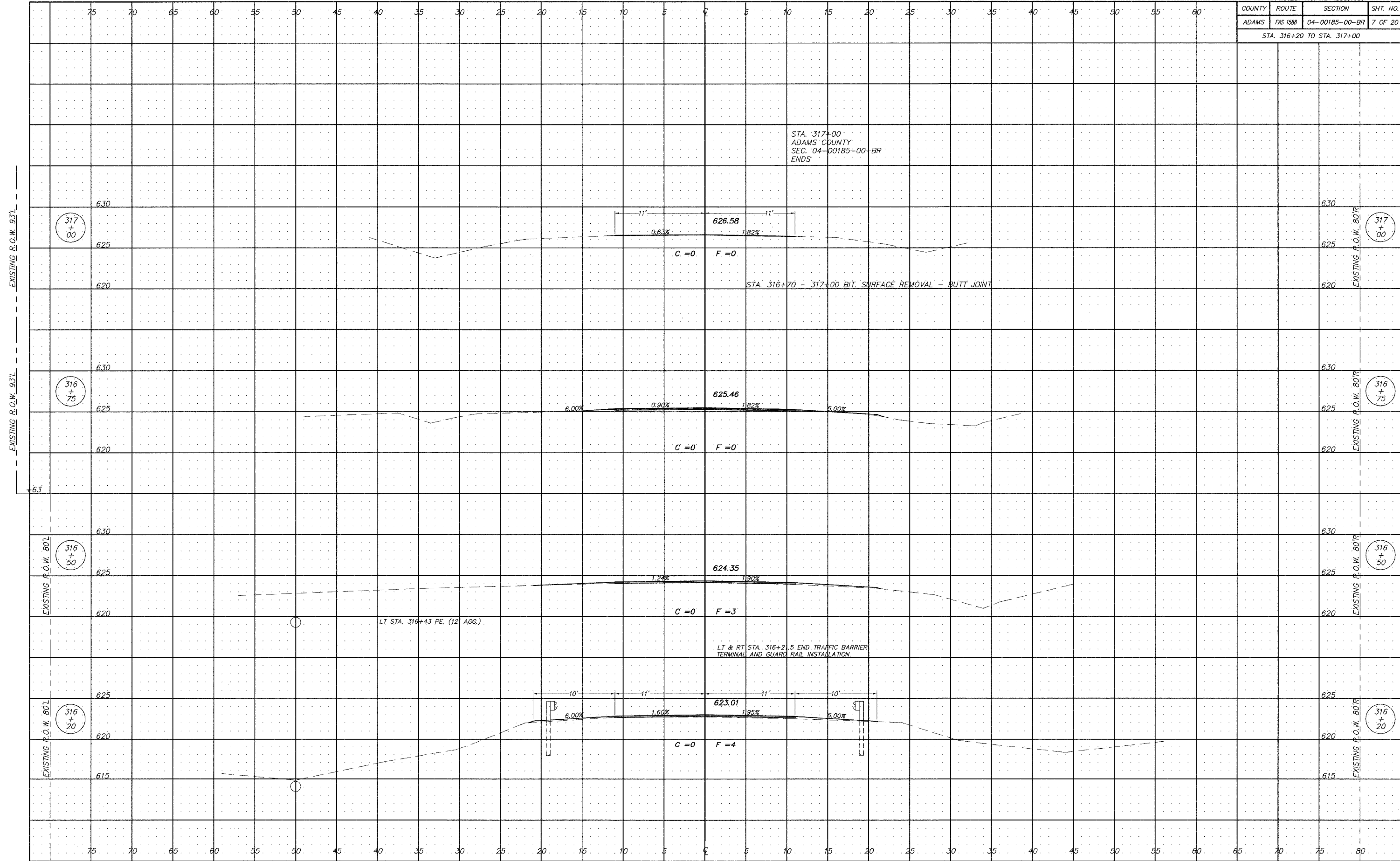
STA. 312+00 TO STA. 312+75



COUNTY	ROUTE	SECTION	SHT. NO.
ADAMS	FAS 1588	04-00185-00-BR	6 OF 20
STA. 315+67 TO STA. 316+00			



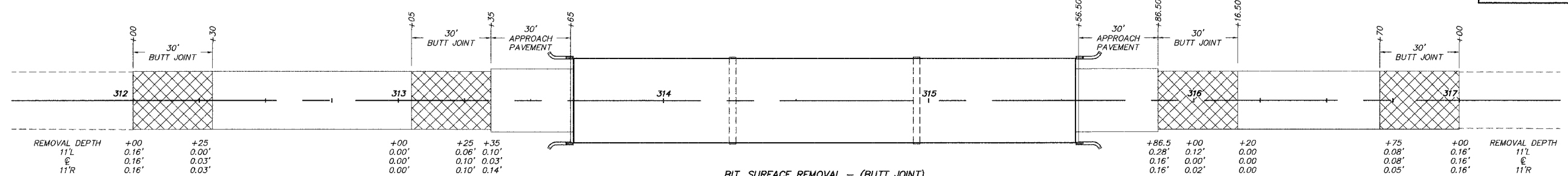
COUNTY	ROUTE	SECTION	SHT. NO.
ADAMS	FAS 1888	04-00185-00-BR	7 OF 20
STA. 316+20 TO STA. 317+00			



COUNTY	ROUTE	SECTION NO.	SHT. NO.
ADAMS	FAS 1588	04-00185-00-BR	8 OF 20
BITUMINOUS SURFACE REMOVAL - BUTT JOINT			
LEVELING BINDER (MACHINE METHOD)			
END OF BRIDGE APPROACH PAVEMENT			

BITUMINOUS SURFACE REMOVAL - BUTT JOINT

SEE CROSS SECTION SHEETS FOR PAVEMENT CROSS SLOPES.

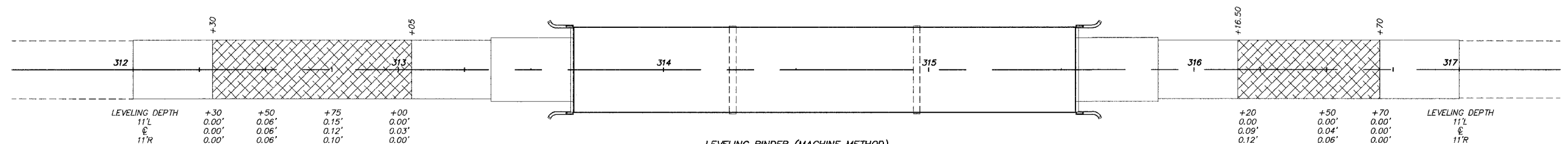


BIT. SURFACE REMOVAL - (BUTT JOINT)

STA. - STA.	AREA (SQ. YD.)
312+00 - 312+30	73.3
313+05 - 313+35	73.3
315+86.5 - 316+16.5	73.3
316+70 - 317+00	73.3
TOTAL	293

BITUMINOUS CONCRETE SURFACE COURSE LEVELING BINDER (MACHINE METHOD)

SEE CROSS SECTION SHEETS FOR PAVEMENT CROSS SLOPES.



BIT. CONCRETE SURFACE COURSE

STA. - STA.	TON
312+00 - 313+35	40
315+86.5 - 317+00	35
TOTAL	75

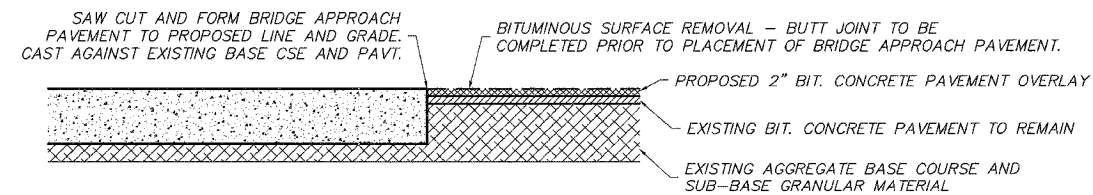
LEVELING BINDER (MACHINE METHOD)

STA. - STA.	TON
312+30 - 313+05	8
316+16.5 - 316+70	7
TOTAL	15

BIT. MATERIALS (PRIME COAT)

STA. - STA.	GALLON
312+00 - 313+35	35
315+86.5 - 317+00	30
TOTAL	65

END OF BRIDGE APPROACH PAVEMENT DETAIL



ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	9
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	
04-00185-00-BR		* 04-00185-00-BR		

Existing Structure - Single bridge built in 1959. Structure No. 001-3026 at Sta 314+60.75.
The structure is a three span, wide flange steel beam bridge with open slab concrete abutments and concrete piers, 191'-6" back to back of abutments, 28'-0" roadway width and 0° skew.

Roadway will be closed during construction. Access to local properties shall be maintained during construction.

No salvage.

BM #1 -
RR Spike in Power Pole, 60' Rt.
of Sta 312+07, Elevation = 599.54

SCOPE OF WORK

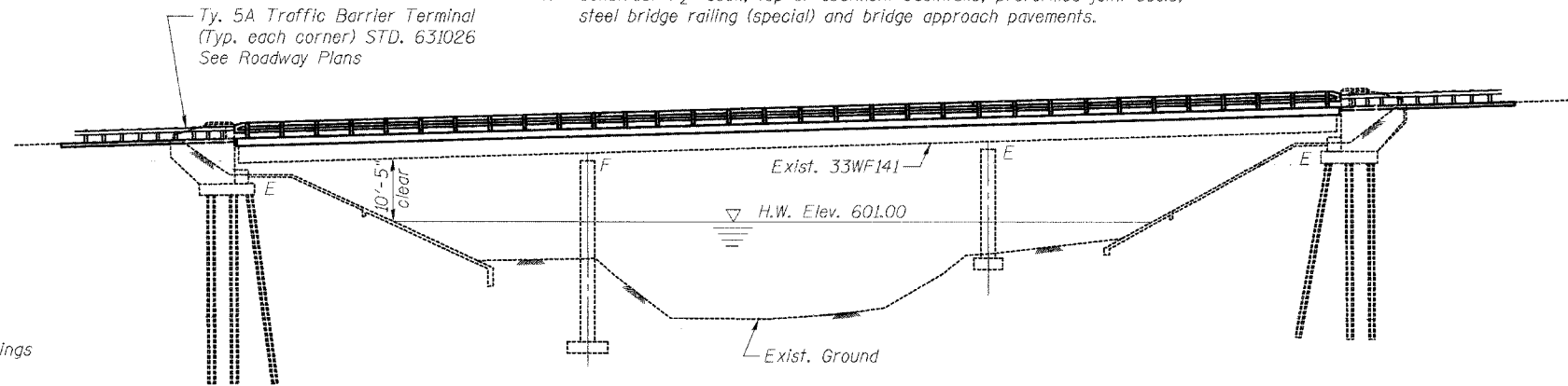
1. Remove deck, curbs, railing and top of abutment backwalls.
2. Remove existing rocker expansion bearings at abutments. Replace with elastomeric bearings.
3. Install shear connectors in positive moment areas of beam lines.
4. Construct 7 1/2" deck, top of abutment backwalls, preformed joint seals, steel bridge railing (special) and bridge approach pavements.

GENERAL NOTES

Painting of the existing structural steel will not be done under this contract.
All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type I.
Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
Plan dimensions and details relative to existing structure have been taken from existing plans, and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variation shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For Type I Elastomeric Bearings, two 1/8" shims of the dimensions of the top plate shall be provided and placed as detailed.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
All construction joints shall be bonded.
Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item "Removal of Existing Concrete Deck". All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.
The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2-3 Top of Slab Elevations
- 4-5 Superstructure
- 6 Steel Bridge Rail (Special)
- 7 Structural Steel Details
- 8 Moment & Reaction Tables, Jack and Remove Existing Bearings
- 9 Type I Elastomeric Bearing
- 10 Type II Elastomeric Bearing
- 11 Anchor Bolt Details for Bearings
- 12 Bridge Approach Pavement (Special)



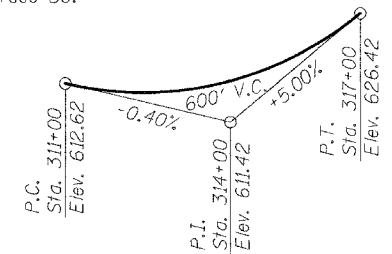
ELEVATION

McKEE CREEK
REBUILT 200...
SEC. 04-00185-00-BR
PROJECT RS-1588 (106)
LOADING HS20 STR. NO. 001-3026

Rail Mount Name Plate at Southwest Corner of Bridge (See Plan)

NAME PLATE

See Std. 515001
(1 Required)



PROFILE GRADE

(along centerline of roadway)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Name Plates	EACH	1		1
Removal of Existing Concrete Deck	EACH	1		1
Protective Coat	SQ YD	658		658
Elastomeric Bearing Assembly Type I	EACH	6		6
Elastomeric Bearing Assembly Type II	EACH	6		6
Concrete Superstructure	CU YD	148.6		148.6
Stud Shear Connectors	EACH	2,718		2,718
Reinforcement Bars, Epoxy Coated	POUND	34,370		34,370
Preformed Joint Seal 2 1/2"	FOOT	31.5		31.5
Preformed Joint Seal 4"	FOOT	31.5		31.5
Bridge Deck Grooving	SQ YD	658		658
Concrete Removal	CU YD	3.5		3.5
Jack and Remove Existing Bearings	Each	12		12
Steel Bridge Rail (Special)	FOOT	383		383
Bridge Approach Pavement (Special)	SQ YD	160		160

Sta. Inc.

Centerline of FAS Rte 1588 & Profile Grade Line

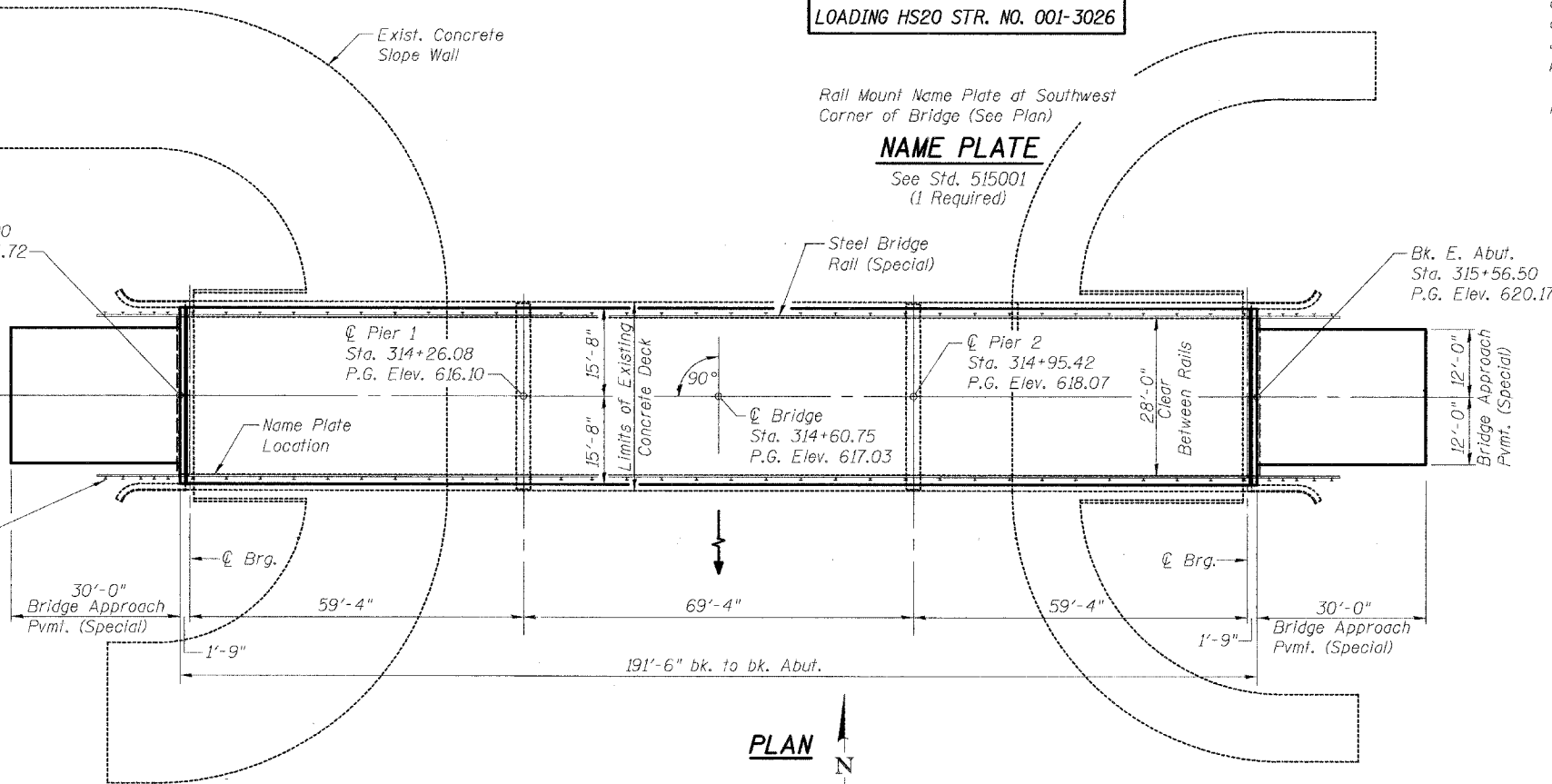
Ty. 5A Traffic Barrier Terminal (Typ. each corner) STD. 631026 See Roadway Plans

Bk. W. Abut. Sta. 313+65.00 P.G. Elev. 614.72

Pier 1 Sta. 314+26.08 P.G. Elev. 616.10

Pier 2 Sta. 314+95.42 P.G. Elev. 618.07

Bk. E. Abut. Sta. 315+56.50 P.G. Elev. 620.17



PLAN

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.043
Site Coefficient (S) = 1.0

DESIGN SPECIFICATIONS

17th Edition - 2002 AASHTO
Load Factor Design
LOADING HS 20-44
Allow 50#/sq. ft. for future wearing surface.

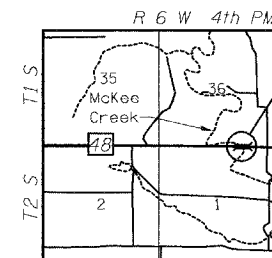
DESIGN STRESSES

FIELD UNITS
f'c = 2500 psi (existing)
f'c = 3500 psi (new)
fy = 60,000 psi (reinf.)
fs = 18,000 psi (Existing Structure)

"I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway Bridges'."



Alan D. Lukens 4/14/04
Alan D. Lukens
Licensed Structural Engineer
State of Illinois No. 081-005167
License Expires November 30, 2004



LOCATION SKETCH

REV. NO.	DRAWN	CHECKED	APPD.	DESCRIPTION	DATE
	BGJ				03/04
F.A.S. RTE. 1588 OVER MCKEE CREEK					
SECTION 04-00185-00-BR					
Project RS-1588 (106)					
ADAMS COUNTY					
GENERAL PLAN AND ELEVATION					
STRUCTURE NUMBER 001-3026					
STATION 314+60.75					

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ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	10
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	
* 04-00185-00-BR				

BEAM 1

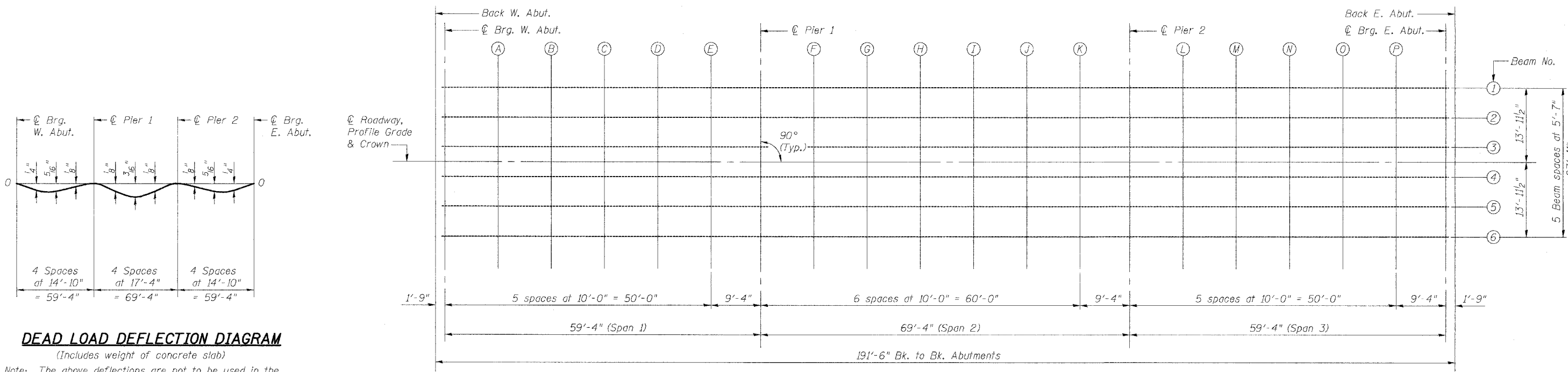
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	313+65.00	13.958' Lt.	614.429	614.429
⊙ Brg. W. Abut.	313+66.75	13.958' Lt.	614.464	614.464
A	313+76.75	13.958' Lt.	614.669	614.684
B	313+86.75	13.958' Lt.	614.882	614.907
C	313+96.75	13.958' Lt.	615.105	615.130
D	314+06.75	13.958' Lt.	615.337	615.354
E	314+16.75	13.958' Lt.	615.577	615.583
⊙ Pier 1	314+26.08	13.958' Lt.	615.810	615.810
F	314+36.08	13.958' Lt.	616.068	616.071
G	314+46.08	13.958' Lt.	616.335	616.347
H	314+56.08	13.958' Lt.	616.611	616.628
I	314+66.08	13.958' Lt.	616.896	616.913
J	314+76.08	13.958' Lt.	617.190	617.201
K	314+86.08	13.958' Lt.	617.493	617.496
⊙ Pier 2	314+95.42	13.958' Lt.	617.783	617.783
L	315+05.42	13.958' Lt.	618.104	618.111
M	315+15.42	13.958' Lt.	618.433	618.451
N	315+25.42	13.958' Lt.	618.772	618.797
O	315+35.42	13.958' Lt.	619.119	619.143
P	315+45.42	13.958' Lt.	619.475	619.489
⊙ Brg. E. Abut.	315+54.75	13.958' Lt.	619.816	619.816
Bk. E. Abut.	315+56.50	13.958' Lt.	619.881	619.881

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	313+65.00	8.375' Lt.	614.546	614.546
⊙ Brg. W. Abut.	313+66.75	8.375' Lt.	614.581	614.581
A	313+76.75	8.375' Lt.	614.785	614.800
B	313+86.75	8.375' Lt.	614.999	615.024
C	313+96.75	8.375' Lt.	615.221	615.246
D	314+06.75	8.375' Lt.	615.453	615.470
E	314+16.75	8.375' Lt.	615.693	615.699
⊙ Pier 1	314+26.08	8.375' Lt.	615.926	615.926
F	314+36.08	8.375' Lt.	616.184	616.187
G	314+46.08	8.375' Lt.	616.451	616.463
H	314+56.08	8.375' Lt.	616.727	616.744
I	314+66.08	8.375' Lt.	617.012	617.029
J	314+76.08	8.375' Lt.	617.306	617.317
K	314+86.08	8.375' Lt.	617.609	617.612
⊙ Pier 2	314+95.42	8.375' Lt.	617.900	617.900
L	315+05.42	8.375' Lt.	618.220	618.227
M	315+15.42	8.375' Lt.	618.550	618.568
N	315+25.42	8.375' Lt.	618.888	618.913
O	315+35.42	8.375' Lt.	619.235	619.259
P	315+45.42	8.375' Lt.	619.592	619.606
⊙ Brg. E. Abut.	315+54.75	8.375' Lt.	619.932	619.932
Bk. E. Abut.	315+56.50	8.375' Lt.	619.997	619.997

BEAM 3

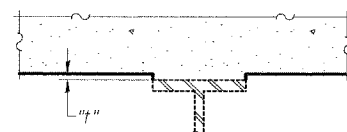
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	313+65.00	2.792' Lt.	614.662	614.662
⊙ Brg. W. Abut.	313+66.75	2.792' Lt.	614.697	614.697
A	313+76.75	2.792' Lt.	614.901	614.916
B	313+86.75	2.792' Lt.	615.115	615.140
C	313+96.75	2.792' Lt.	615.338	615.363
D	314+06.75	2.792' Lt.	615.569	615.586
E	314+16.75	2.792' Lt.	615.810	615.816
⊙ Pier 1	314+26.08	2.792' Lt.	616.042	616.042
F	314+36.08	2.792' Lt.	616.300	616.303
G	314+46.08	2.792' Lt.	616.567	616.579
H	314+56.08	2.792' Lt.	616.843	616.860
I	314+66.08	2.792' Lt.	617.128	617.145
J	314+76.08	2.792' Lt.	617.422	617.433
K	314+86.08	2.792' Lt.	617.725	617.728
⊙ Pier 2	314+95.42	2.792' Lt.	618.016	618.016
L	315+05.42	2.792' Lt.	618.336	618.343
M	315+15.42	2.792' Lt.	618.666	618.684
N	315+25.42	2.792' Lt.	619.004	619.029
O	315+35.42	2.792' Lt.	619.352	619.376
P	315+45.42	2.792' Lt.	619.708	619.722
⊙ Brg. E. Abut.	315+54.75	2.792' Lt.	620.049	620.049
Bk. E. Abut.	315+56.50	2.792' Lt.	620.113	620.113



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete slab)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown above and on Sheet #3 of 12.



At Minimum Fillet

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at the stations shown on this sheet and on sheet #3 of 12. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown above and on Sheet #3 of 12, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

PLAN

Note: All dimensions in the plan are measured horizontally



Note: All elevations are at top of concrete.

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BGJ	KW			03/04
F.A.S. RTE. 1588 OVER MCKEE CREEK SECTION 04-00185-00-BR Project RS-1588 (106) ADAMS COUNTY					
TOP OF SLAB ELEVATIONS STRUCTURE NUMBER 001-3026 STATION 314+60.75					

ROUTE NO. FAS RTE 1588	SEC *	COUNTY ADAMS	TOTAL SHEETS 20	SHEET NO. 11
FED. ROAD DIST. NO. 7		BLINDS	PROJECT	
* 04-00185-00-BR				

ROADWAY, PROFILE GRADE, & CROWN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	313+65.00	0.000	614.720	614.720
⊙ Brg. W. Abut.	313+66.75	0.000	614.755	614.755
A	313+76.75	0.000	614.960	614.975
B	313+86.75	0.000	615.173	615.198
C	313+96.75	0.000	615.396	615.421
D	314+06.75	0.000	615.627	615.644
E	314+16.75	0.000	615.868	615.874
⊙ Pier 1	314+26.08	0.000	616.101	616.101
F	314+36.08	0.000	616.359	616.362
G	314+46.08	0.000	616.625	616.637
H	314+56.08	0.000	616.901	616.918
I	314+66.08	0.000	617.186	617.203
J	314+76.08	0.000	617.480	617.491
K	314+86.08	0.000	617.783	617.786
⊙ Pier 2	314+95.42	0.000	618.074	618.074
L	315+05.42	0.000	618.395	618.402
M	315+15.42	0.000	618.724	618.742
N	315+25.42	0.000	619.062	619.087
O	315+35.42	0.000	619.410	619.434
P	315+45.42	0.000	619.766	619.780
⊙ Brg. E. Abut.	315+54.75	0.000	620.107	620.107
Bk. E. Abut.	315+56.50	0.000	620.172	620.172

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	313+65.00	2.792' Rt.	614.662	614.662
⊙ Brg. W. Abut.	313+66.75	2.792' Rt.	614.697	614.697
A	313+76.75	2.792' Rt.	614.901	614.916
B	313+86.75	2.792' Rt.	615.115	615.140
C	313+96.75	2.792' Rt.	615.338	615.363
D	314+06.75	2.792' Rt.	615.569	615.586
E	314+16.75	2.792' Rt.	615.810	615.816
⊙ Pier 1	314+26.08	2.792' Rt.	616.042	616.042
F	314+36.08	2.792' Rt.	616.300	616.303
G	314+46.08	2.792' Rt.	616.567	616.579
H	314+56.08	2.792' Rt.	616.843	616.860
I	314+66.08	2.792' Rt.	617.128	617.145
J	314+76.08	2.792' Rt.	617.422	617.433
K	314+86.08	2.792' Rt.	617.725	617.728
⊙ Pier 2	314+95.42	2.792' Rt.	618.016	618.016
L	315+05.42	2.792' Rt.	618.336	618.343
M	315+15.42	2.792' Rt.	618.666	618.684
N	315+25.42	2.792' Rt.	619.004	619.029
O	315+35.42	2.792' Rt.	619.352	619.376
P	315+45.42	2.792' Rt.	619.708	619.722
⊙ Brg. E. Abut.	315+54.75	2.792' Rt.	620.049	620.049
Bk. E. Abut.	315+56.50	2.792' Rt.	620.113	620.113

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	313+65.00	8.375' Rt.	614.546	614.546
⊙ Brg. W. Abut.	313+66.75	8.375' Rt.	614.581	614.581
A	313+76.75	8.375' Rt.	614.785	614.800
B	313+86.75	8.375' Rt.	614.999	615.024
C	313+96.75	8.375' Rt.	615.221	615.246
D	314+06.75	8.375' Rt.	615.453	615.470
E	314+16.75	8.375' Rt.	615.693	615.699
⊙ Pier 1	314+26.08	8.375' Rt.	615.926	615.926
F	314+36.08	8.375' Rt.	616.184	616.187
G	314+46.08	8.375' Rt.	616.451	616.463
H	314+56.08	8.375' Rt.	616.727	616.744
I	314+66.08	8.375' Rt.	617.012	617.029
J	314+76.08	8.375' Rt.	617.306	617.317
K	314+86.08	8.375' Rt.	617.609	617.612
⊙ Pier 2	314+95.42	8.375' Rt.	617.900	617.900
L	315+05.42	8.375' Rt.	618.220	618.227
M	315+15.42	8.375' Rt.	618.550	618.568
N	315+25.42	8.375' Rt.	618.888	618.913
O	315+35.42	8.375' Rt.	619.235	619.259
P	315+45.42	8.375' Rt.	619.592	619.606
⊙ Brg. E. Abut.	315+54.75	8.375' Rt.	619.932	619.932
Bk. E. Abut.	315+56.50	8.375' Rt.	619.997	619.997

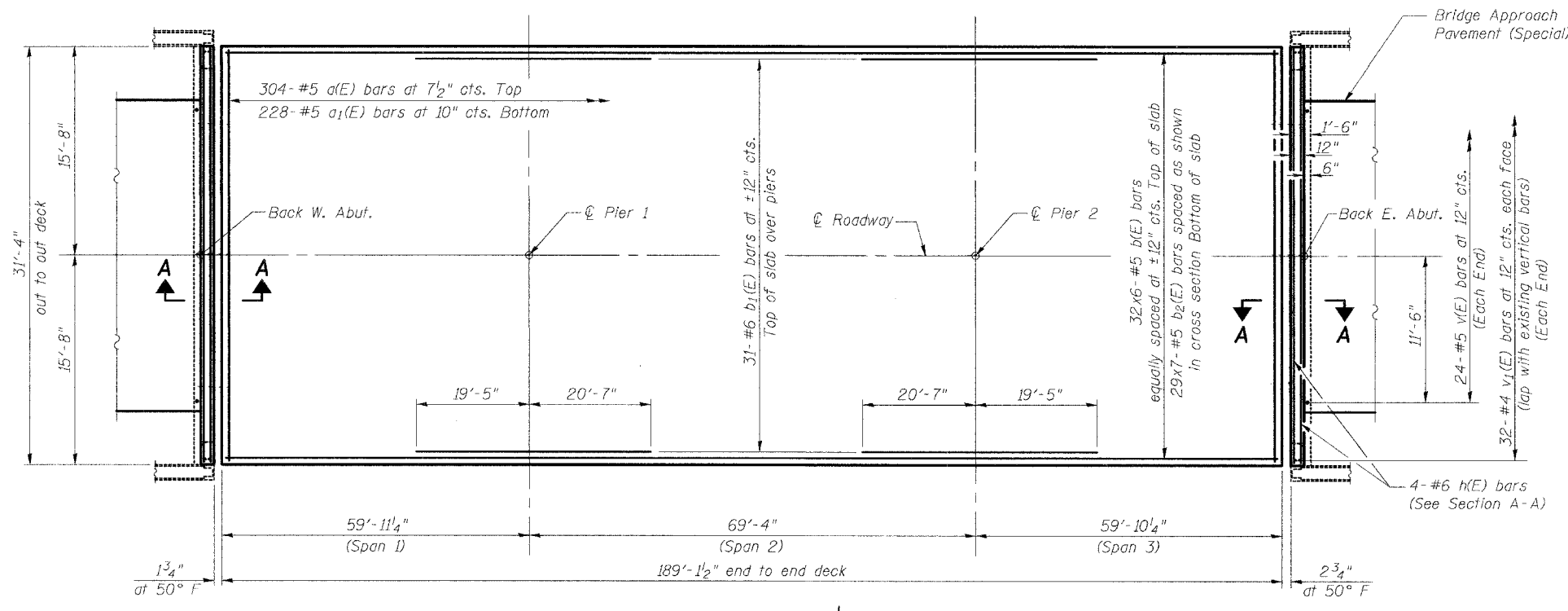
BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	313+65.00	13.958' Rt.	614.429	614.429
⊙ Brg. W. Abut.	313+66.75	13.958' Rt.	614.464	614.464
A	313+76.75	13.958' Rt.	614.669	614.684
B	313+86.75	13.958' Rt.	614.882	614.907
C	313+96.75	13.958' Rt.	615.105	615.130
D	314+06.75	13.958' Rt.	615.337	615.354
E	314+16.75	13.958' Rt.	615.577	615.583
⊙ Pier 1	314+26.08	13.958' Rt.	615.810	615.810
F	314+36.08	13.958' Rt.	616.068	616.071
G	314+46.08	13.958' Rt.	616.335	616.347
H	314+56.08	13.958' Rt.	616.611	616.628
I	314+66.08	13.958' Rt.	616.896	616.913
J	314+76.08	13.958' Rt.	617.190	617.201
K	314+86.08	13.958' Rt.	617.493	617.496
⊙ Pier 2	314+95.42	13.958' Rt.	617.783	617.783
L	315+05.42	13.958' Rt.	618.104	618.111
M	315+15.42	13.958' Rt.	618.433	618.451
N	315+25.42	13.958' Rt.	618.772	618.797
O	315+35.42	13.958' Rt.	619.119	619.143
P	315+45.42	13.958' Rt.	619.475	619.489
⊙ Brg. E. Abut.	315+54.75	13.958' Rt.	619.816	619.816
Bk. E. Abut.	315+56.50	13.958' Rt.	619.881	619.881

Notes:
Work this sheet with Sheet #2 of 12.

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
					03/04
F.A.S. RTE. 1588 OVER MCKEE CREEK SECTION 04-00185-00-BR Project RS-1588 (106) ADAMS COUNTY					
TOP OF SLAB ELEVATIONS STRUCTURE NUMBER 001-3026 STATION 314+60.75					

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	12
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	
* 04-00185-00-BR				

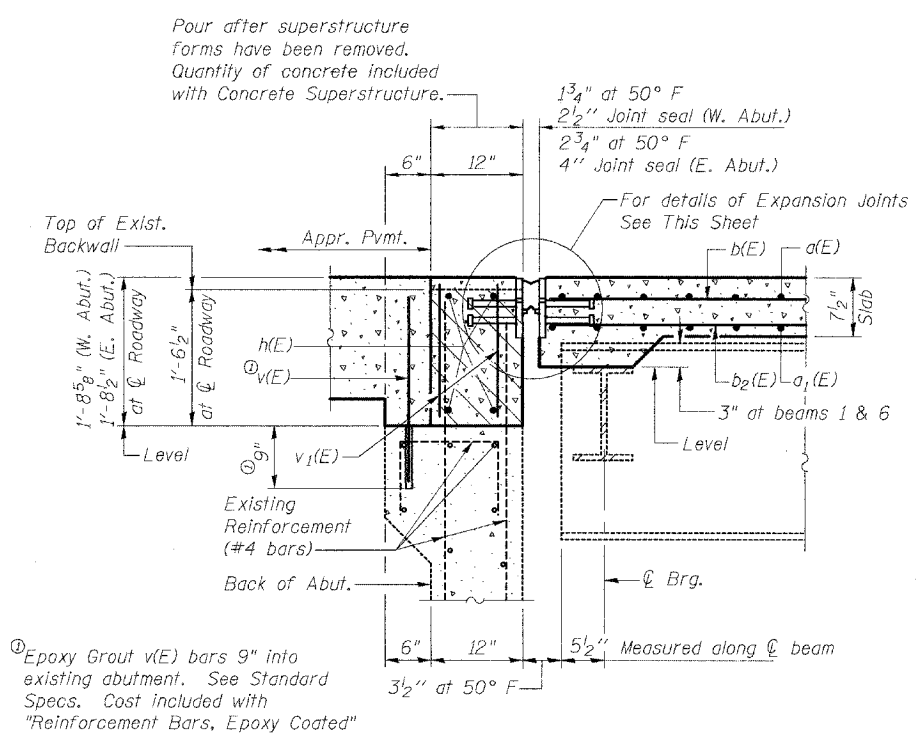


Notes:
 Reinforcement bars designated (E) shall be epoxy coated.
 Bars Indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
 Adjust location of reinforcement bar in deck to miss Steel Rail Posts.
 Minimum bar lap of #5 bars = 2'-2".
 See Sheet #5 of 12 for Cross Section, Top of Abutment Backwall Removal, and Abutment Backwall Elevation.
 Existing reinforcement extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included with Concrete Removal.
 Hatched areas indicate Concrete Removal.

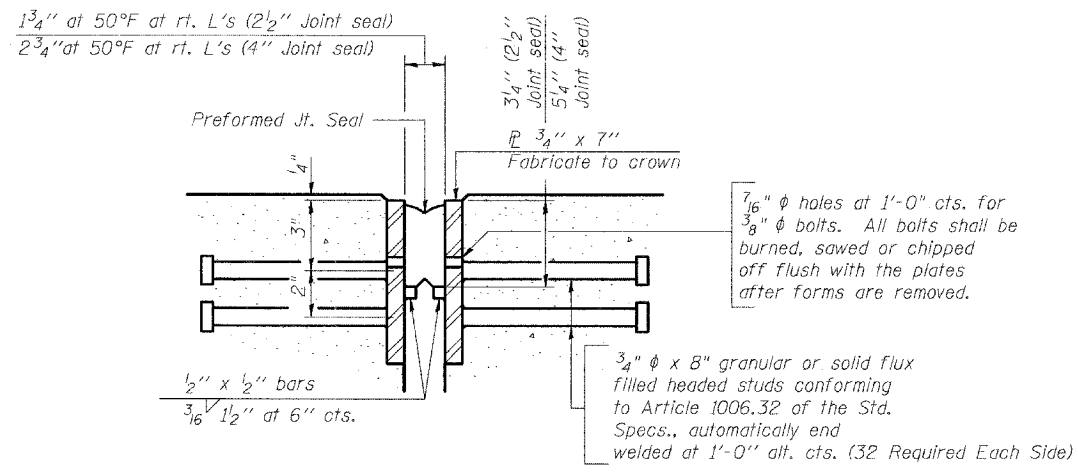
PLAN

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	304	#5	31'-1"	—
a1(E)	228	#5	31'-1"	—
b(E)	192	#5	33'-5"	—
b1(E)	62	#6	40'-0"	—
b2(E)	203	#5	29'-0"	—
h(E)	8	#6	31'-1"	—
v(E)	48	#5	1'-11"	—
v1(E)	128	#4	1'-1"	—
Reinforcement Bars, Epoxy Coated			POUND	34,370
Concrete Superstructure			CU. YD.	148.6
Concrete Removal			CU. YD.	3.5
Protective Coat			SQ. YD.	658
Bridge Deck Grooving			SQ. YD.	658



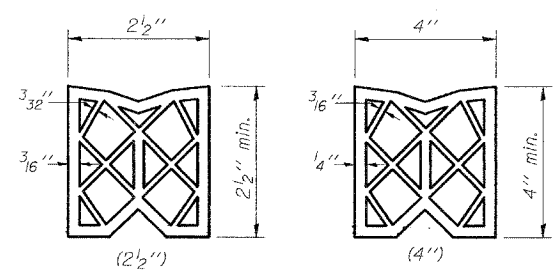
SECTION A-A



SECTION THRU EXPANSION JOINT (2 1/2" and 4" joint seals)

GENERAL NOTES

Furnish steel plates in segments of 20 feet maximum length. Maximum space between installed segments shall be 3/16". Seal space with silicone sealant suitable for structural steel.



PREFORMED JOINT SEAL

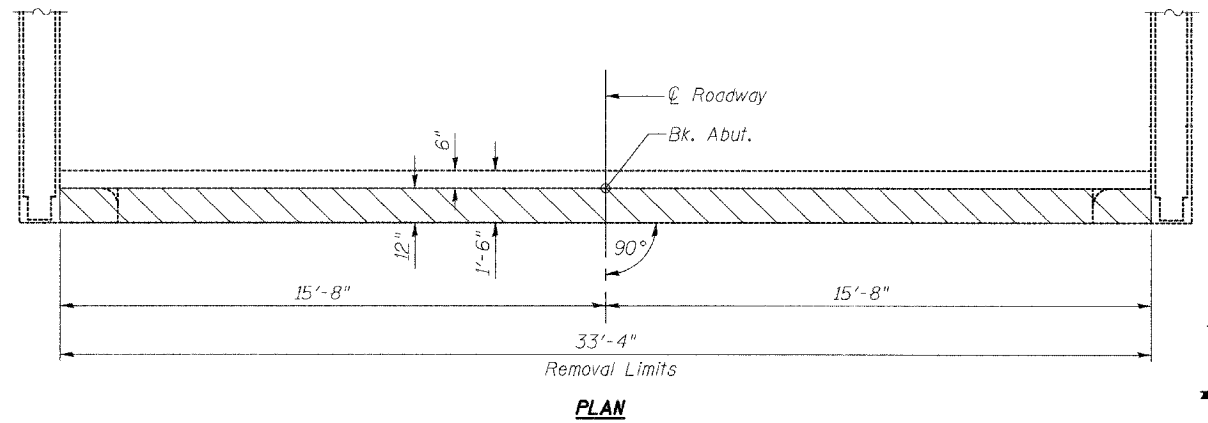
BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Seal 2 1/2"	FOOT	31.5
Preformed Joint Seal 4"	FOOT	31.5

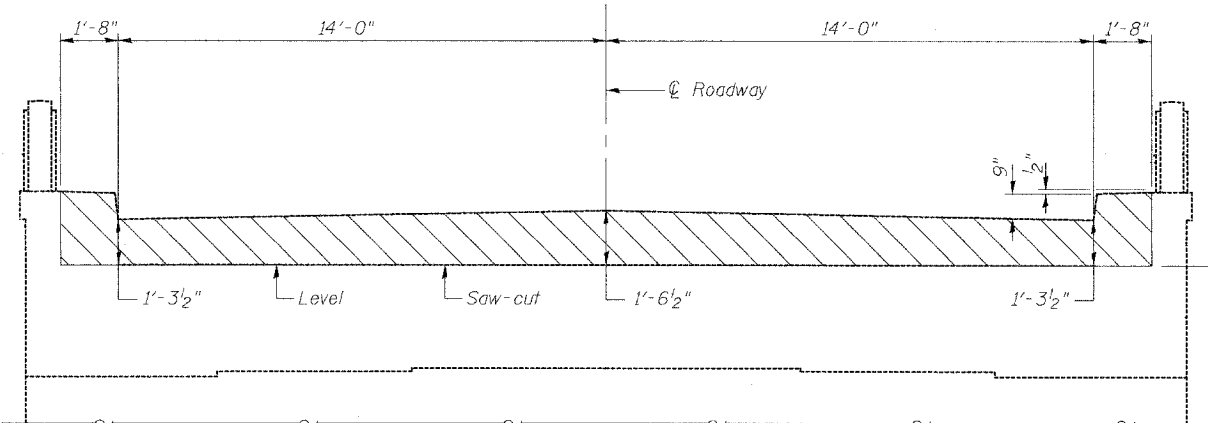
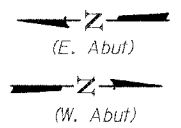
REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BSJ	hzw			03/04
F.A.S. RTE. 1588 OVER MCKEE CREEK SECTION 04-00185-00-BR Project RS-1588 (106) ADAMS COUNTY					
SUPERSTRUCTURE STRUCTURE NUMBER 001-3026 STATION 314+60.75					

4/14/2004 9:01:36 AM p:\04files\040025\bridge Plans\001-3026-Br-bridge.dgn

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	13
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	
* 04-00185-00-BR				



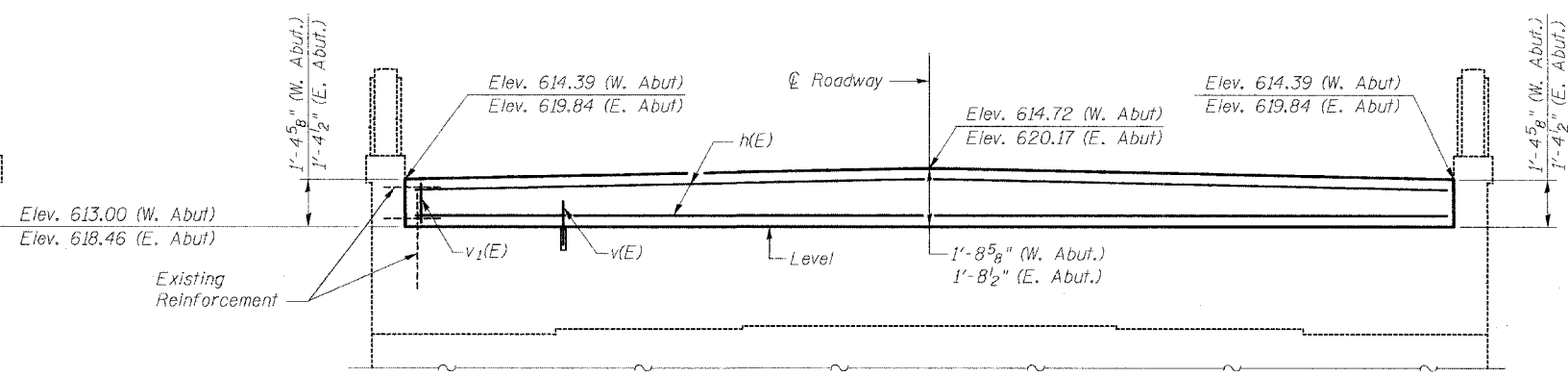
PLAN



ELEVATION

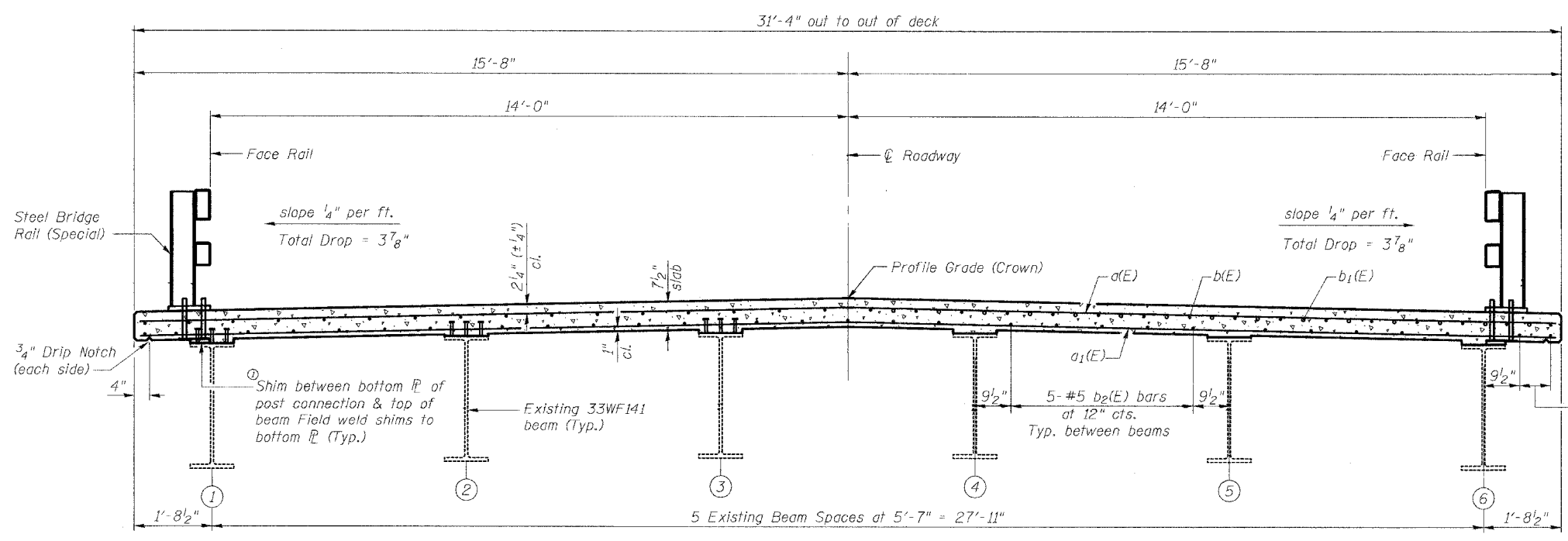
(Looking West at W. Abut.)
(Looking East at E. Abut.)

Note:
Elevations and vertical dimensions are at back of abutment.
TOP OF ABUTMENT BACKWALL REMOVAL



ABUTMENT BACKWALL ELEVATION

Note:
Elevations and vertical dimensions are at back of abutment.
(Looking West at W. Abut.)
(Looking East at E. Abut.)



CROSS SECTION

(Looking East)

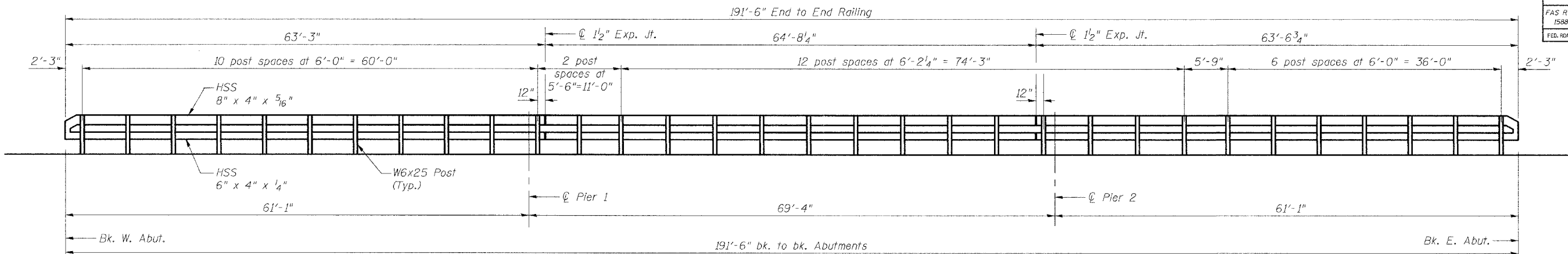
Notes:
Hatched areas indicate Concrete Removal.
See Sheet #4 of 12 for Plan & Superstructure Bill of Material.

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BGJ	MW			03/04
F.A.S. RTE. 1588 OVER MCKEE CREEK SECTION 04-00185-00-BR Project RS-1588 (106) ADAMS COUNTY					
SUPERSTRUCTURE STRUCTURE NUMBER 001-3026 STATION 314+60.75					

① Cost included with "Steel Bridge Rail (Special)"

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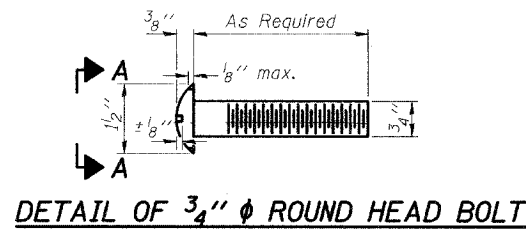
ROUTE NO.	REC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	14
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		
* 04-00185-00-BR				



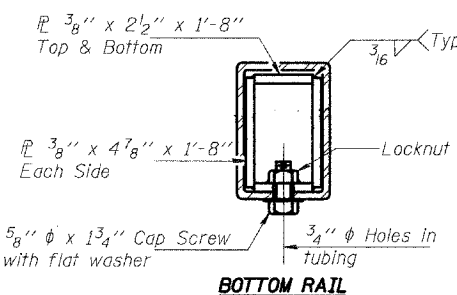
RAILING ELEVATION

NOTES

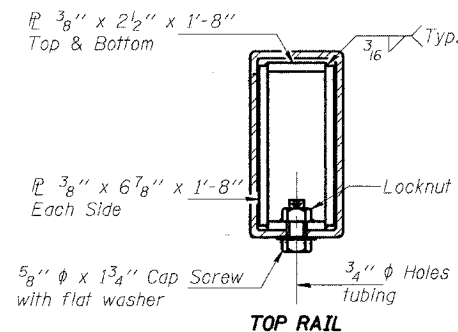
Notes detailing material requirements and construction details for the railing system, including references to ASTM standards and AASHTO specifications.



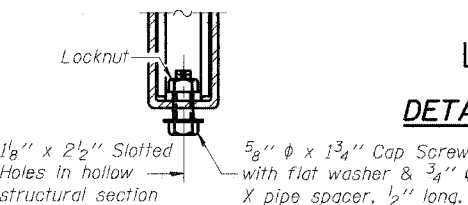
VIEW A-A



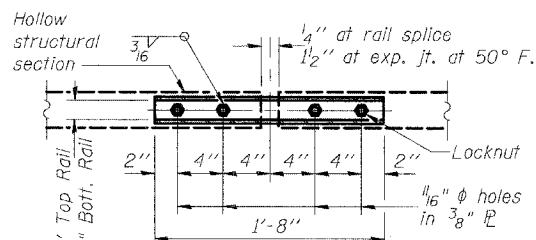
BOTTOM RAIL



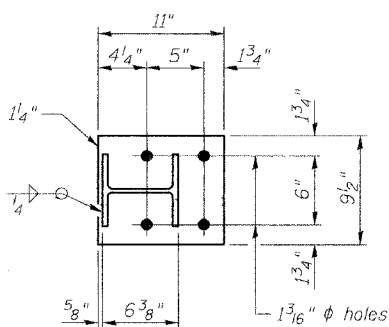
TOP RAIL



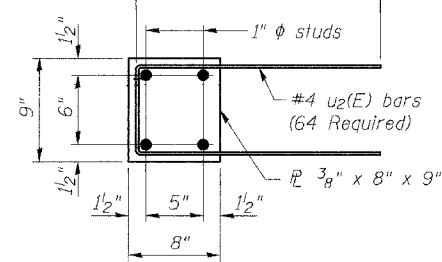
RAIL SPLICE CONNECTION AT EXPANSION JT.



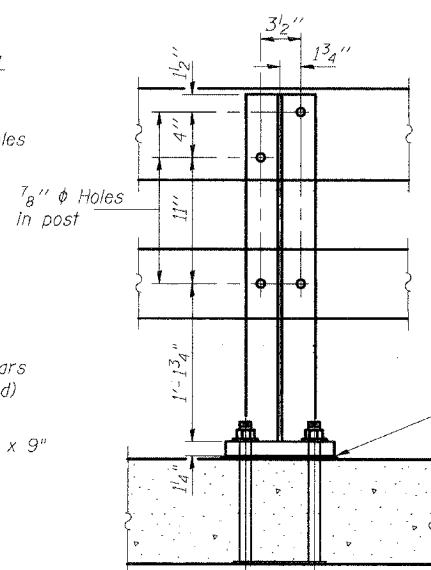
PLAN-BOTT. SPLICE P TYPICAL



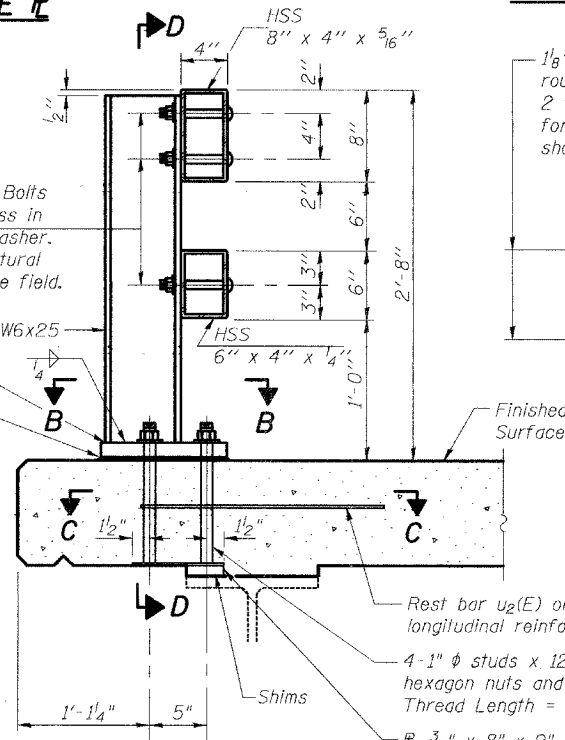
SECTION B-B



SECTION C-C

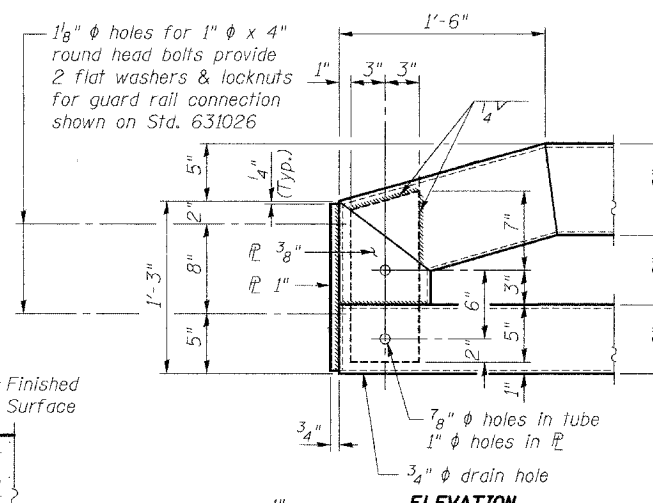


SECTION D-D

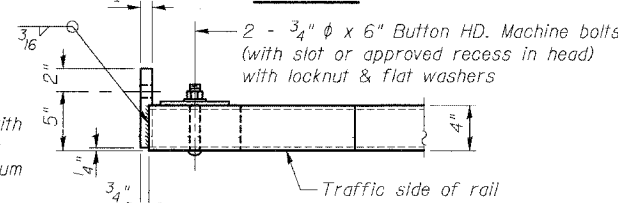


SECTION AT RAIL POST

SECTIONS AT RAIL SPLICE



ELEVATION



PLAN

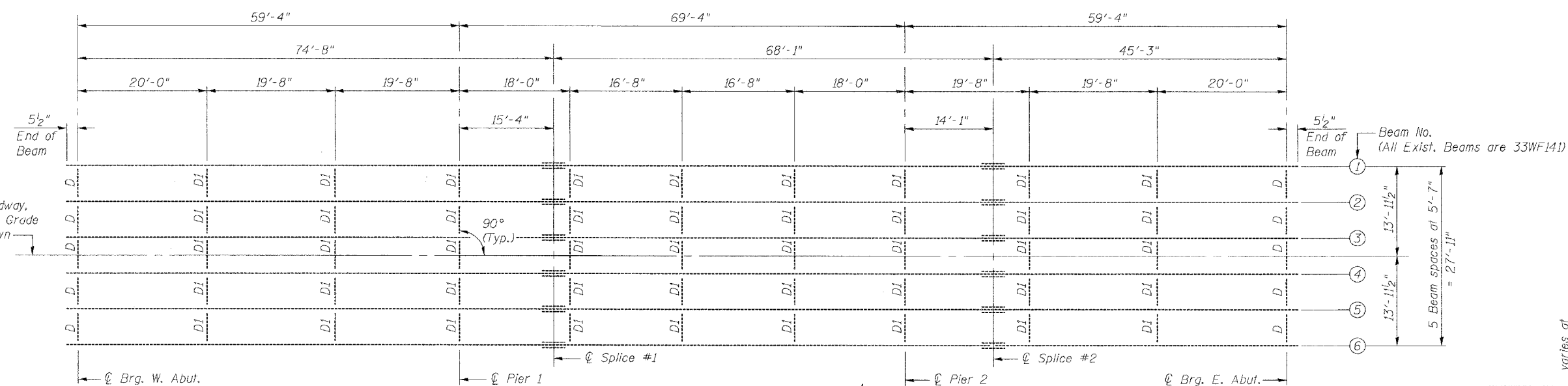
BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail (Special)	FOOT	383

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BGJ	WJW			03/04
<p>F.A.S. RTE. 1588 OVER MCKEE CREEK SECTION 04-00185-00-BR Project RS-1588 (106) ADAMS COUNTY</p> <p>STEEL BRIDGE RAIL (SPECIAL) STRUCTURE NUMBER 001-3026 STATION 314+60.75</p>					

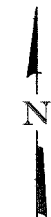
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	#	ADAMS	20	15

FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT
* 04-00185-00-BR		

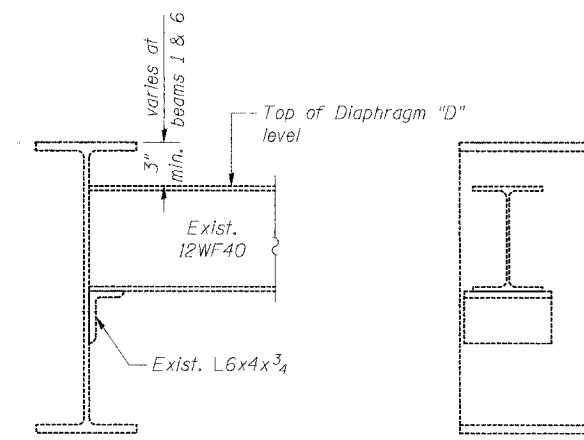


FRAMING PLAN

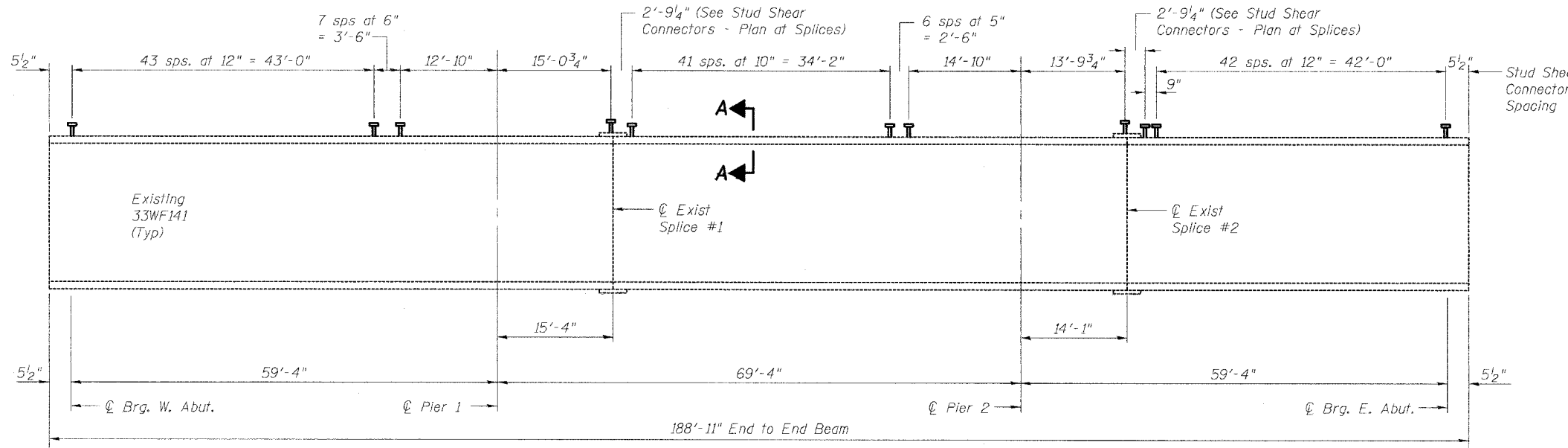
Note: All dimensions in the plan are measured horizontally



Notes:
Existing Diaphragm "D1" are 16WF36.

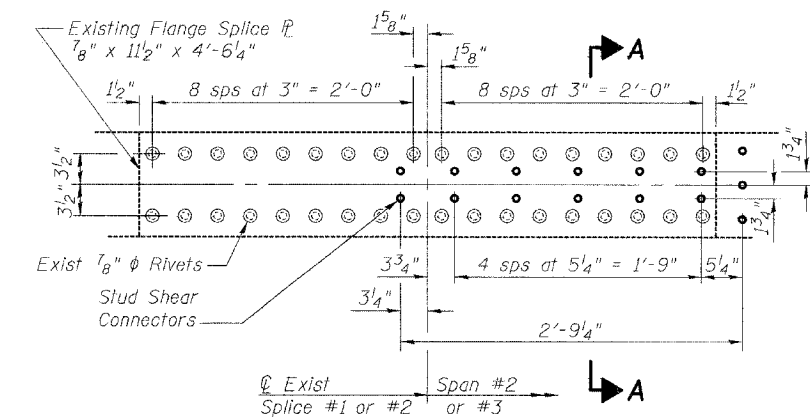


END DIAPHRAGM, D

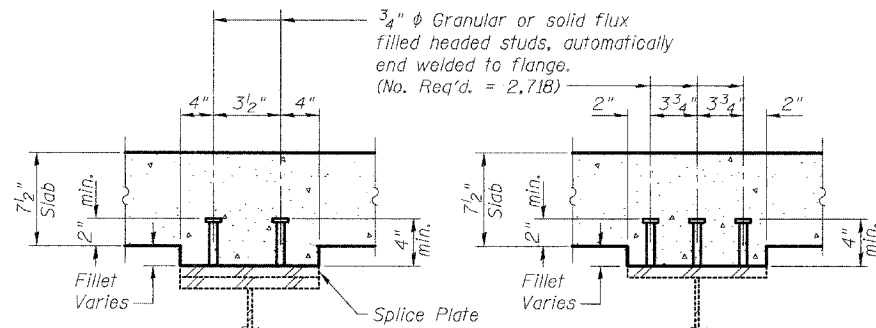


BEAM ELEVATION

Notes:
Adjust stud shear connector spacing in field to miss posts of the Steel Bridge Rail (Special). See sheet #6 of 12.



STUD SHEAR CONNECTORS - PLAN AT SPLICES



SECTION A-A

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BGJ	NW			03/04

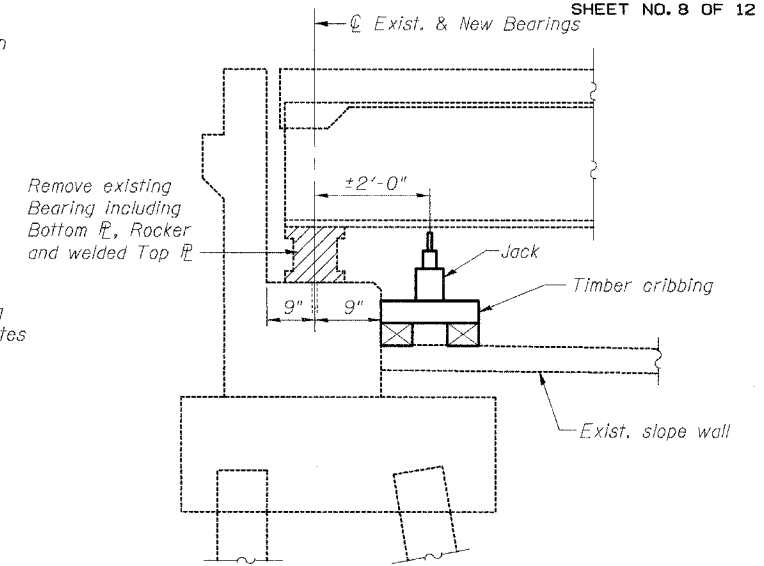
F.A.S. RTE. 1588 OVER MCKEE CREEK
SECTION 04-00185-00-BR
Project RS-1588 (106)
ADAMS COUNTY

STRUCTURAL STEEL DETAILS
STRUCTURE NUMBER 001-3026
STATION 314+60.75

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	15
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		
* 04-00185-00-BR				

JACK AND REMOVE EXISTING BEARINGS PROCEDURES

- Jacking and Cribbing shall be done after existing deck removal is completed.
- The Contractor shall submit for approval by the Engineer plans for jacking and cribbing, prior to commencing any work at the bearings. The maximum dead load reaction with the deck removed (per bearing) at the east and west abutments = 4 kips. The minimum jack capacity at each beam shall be 8 kips at the east and west abutments.
- Top of beam elevations shall be measured prior to jacking and shall remain the same after bearings are in place.
- There shall be at least one jack per bearing and the jack shall be placed close to the bearing. The steel shall be raised a maximum of 1/4" and shall be blocked in position until after the completion of the installation of new bearings.
- Burn the existing anchor bolts flush with the concrete surface, grind smooth, and seal with epoxy. The rockers and top and bottom plates shall be removed. The top plate shall be removed using the air-arc method. Grind smooth all weld material remaining on the bottom flange. Cost of removing anchor bolts, rockers, top plates, and bottom plates shall be included with "Jack and Remove Existing Bearings."
- Anchor bolts shall be set before bolting diaphragms over supports.
- The new concrete abutment seats, elastomeric bearings, and end diaphragms shall be in place and the Jacks lowered before the new concrete deck is poured.



AT EAST AND WEST ABUTMENTS
(Dimensions at Rt L's)
EXISTING BEARING REMOVAL DETAIL

		0.4 Sp. 1 & 0.6 Sp. 3	Piers 1 & 2	0.5 Sp. 2
I_s	(in ⁴)	7,450	7,450	7,450
I_c (n)	(in ⁴)	18,132		18,132
I_c (3n)	(in ⁴)	13,156		13,156
S_s	(in ³)	448	448	448
S_c (n)	(in ³)	634		634
S_c (3n)	(in ³)	569		569
\bar{D}	(k/')	0.71	0.99	0.71
$M\bar{D}$	('k)	182	395	132
$s\bar{D}$	(k/')	0.28		0.28
$M_s\bar{D}$	('k)	78		67
$M\bar{L}$	('k)	345	198	348
M (Imp)	('k)	94	52	90
$5/3[M\bar{L} + M$ (Imp)]	('k)	732	417	730
M_a	('k)	1,289	1,055	1,208
$f_s\bar{D}$ non-comp	(ksi)	4.9	10.6	3.5
$f_s\bar{D}$ (comp)	(ksi)	1.6		1.4
$f_s 5/3(L + Imp)$	(ksi)	13.9	11.2	13.8
f_s (Overload)	(ksi)	20.4	21.7	18.8
f_s (Total)	(ksi)	26.5	28.3	24.4
VR	(kips)	32.0		34.2

		W. & E. Abutts.	Piers 1 & 2
$R\bar{D}$	(kips)	22.7	70.4
$R\bar{L}$	(kips)	30.0	37.0
$Imp.$	(kips)	8.1	7.3
R (Total)	(kips)	60.8	114.7

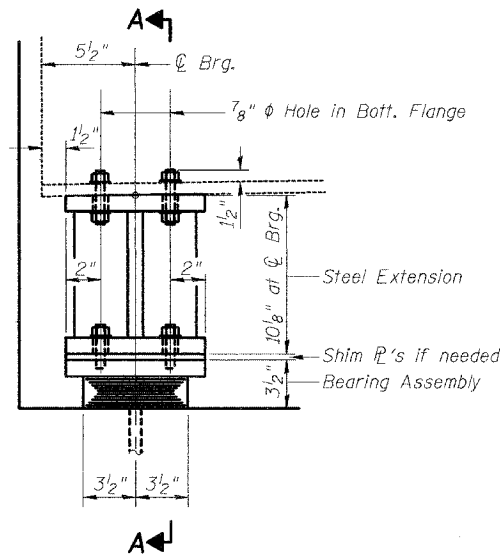
BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	12

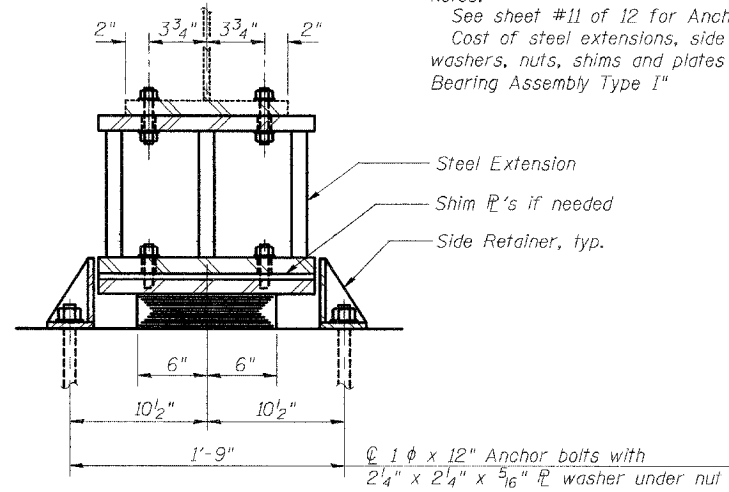
I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total & Overload).
 $I_c(n)$ and $S_c(n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 $I_c(3n)$ and $S_c(3n)$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
 VR is the maximum Live Load + Impact shear range in span.
 M_a (Applied Moment) = $1.3[M\bar{D} + Ms\bar{D} + 5/3(M\bar{L} + M_{Imp})]$.
 f_s (Overload) is the sum of the stresses due to $M\bar{D} + Ms\bar{D} + 5/3(M\bar{L} + M_{Imp})$.
 f_s (Total) is the sum of the stresses due to $1.3[M\bar{D} + Ms\bar{D} + 5/3(M\bar{L} + M_{Imp})]$.
 $M\bar{D}$ - Moment due to dead loads on non-composite section.
 $Ms\bar{D}$ - Moment due to dead loads on composite section.
 $M\bar{L}$ - Moment due to live load on non-composite or composite section.
 M (Imp) - Moment due to live load impact on non-composite or composite section.

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BGJ	MW			03/04
F.A.S. RTE. 1588 OVER MCKEE CREEK SECTION 04-00185-00-BR Project RS-1588 (106) ADAMS COUNTY MOMENT & REACTION TABLES, JACK AND REMOVE EXISTING BEARINGS STRUCTURE NUMBER 001-3026 STATION 314+60.75					

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	17
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		
* 04-00185-00-BR				

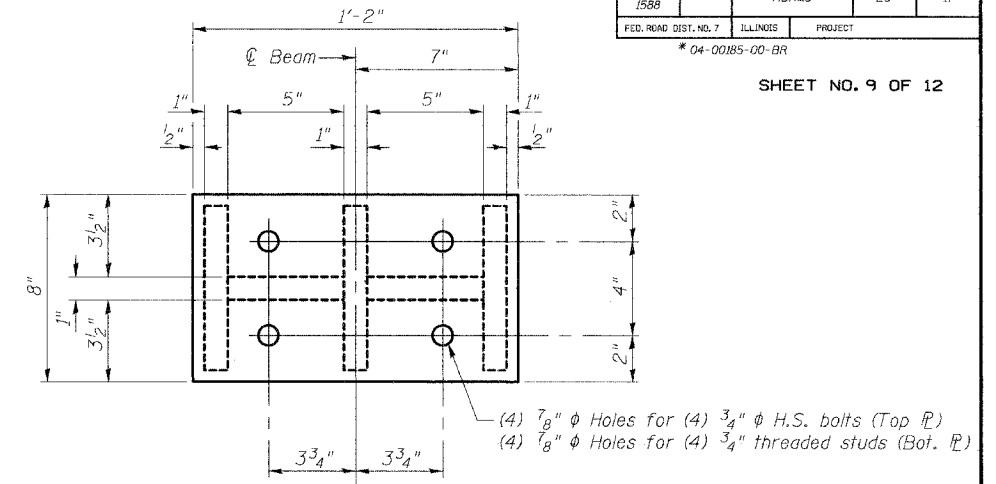


ELEVATION AT WEST ABUTMENT



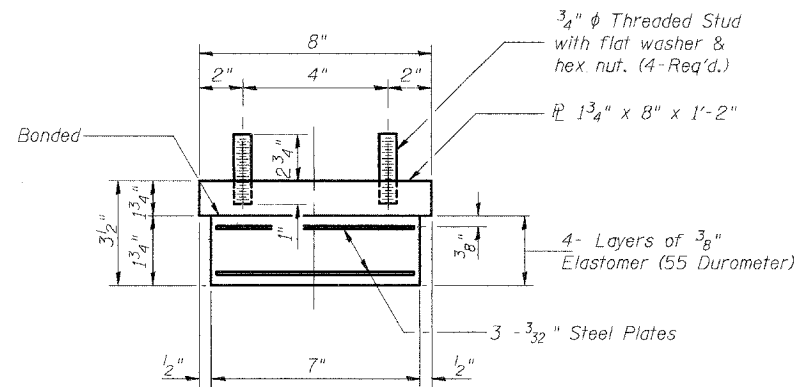
SECTION A-A

Notes:
See sheet #11 of 12 for Anchor Bolt installation.
Cost of steel extensions, side retainers, anchor bolts, washers, nuts, shims and plates are included in "Elastomeric Bearing Assembly Type I"



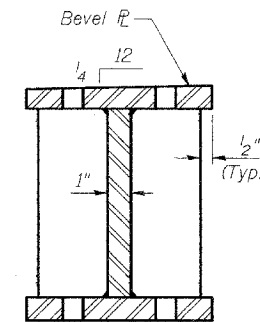
PLAN STEEL EXTENSION

TYPE I ELASTOMERIC EXPANSION BEARING

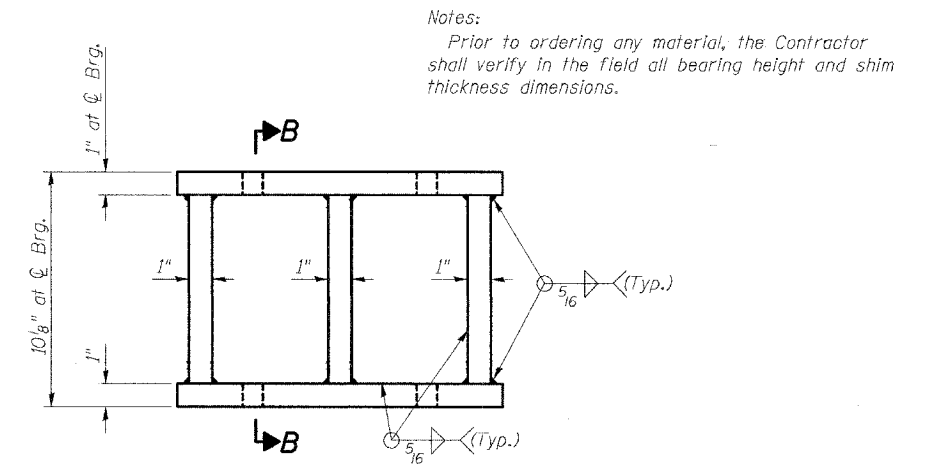


BEARING ASSEMBLY

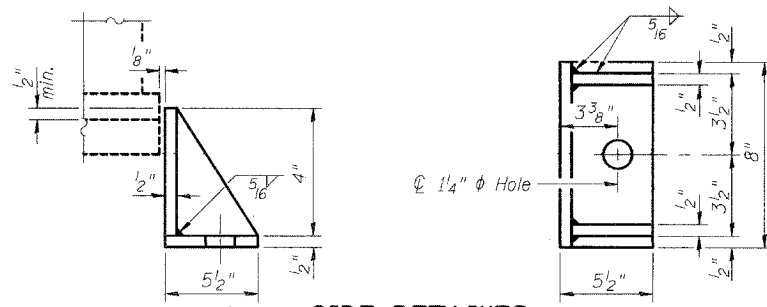
Note: Shim plates shall not be placed under Bearing Assembly.



SECTION B-B



ELEVATION STEEL EXTENSION



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	EACH	6

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BGJ	YAW			03/04

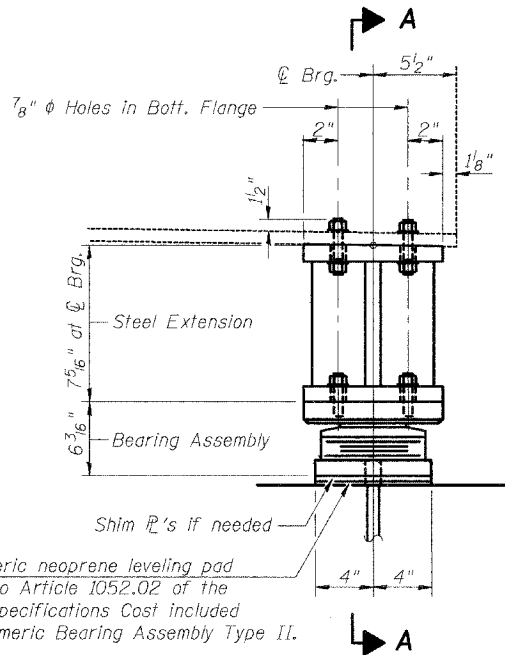
F.A.S. RTE. 1588 OVER MCKEE CREEK
SECTION 04-00185-00-BR
Project RS-1588 (106)
ADAMS COUNTY

TYPE I ELASTOMERIC BEARING
STRUCTURE NUMBER 001-3026
STATION 314+60.75

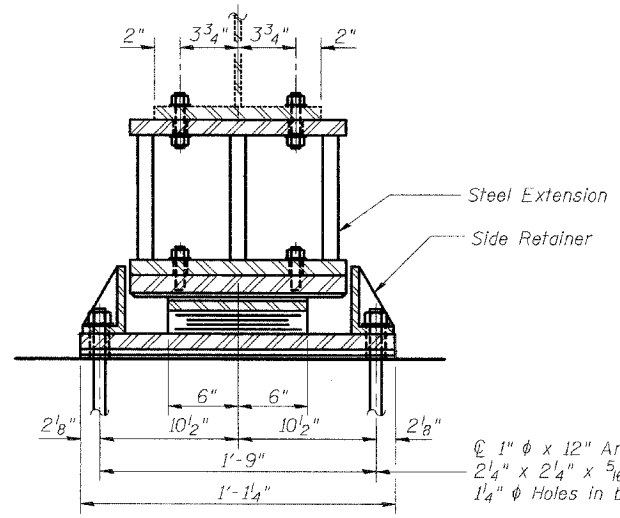
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	18
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

* 04-00185-00-BR

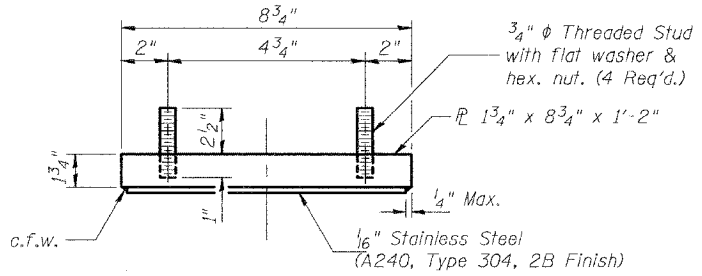
Notes:
See sheet #11 of 12 for Anchor Bolt installation.
Cost of steel extensions, side retainers, anchor bolts, washers, nuts, shims and plates are included in "Elastomeric Bearing Assembly Type II"



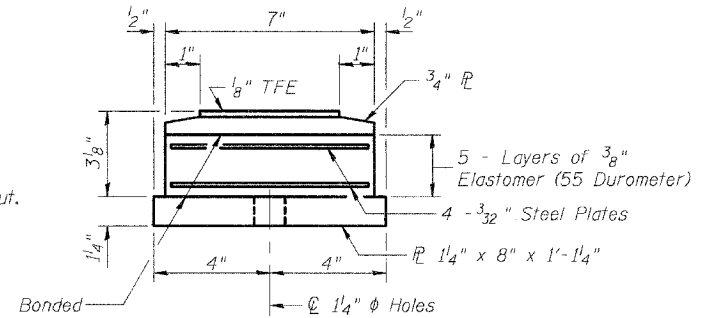
ELEVATION AT EAST ABUTMENT



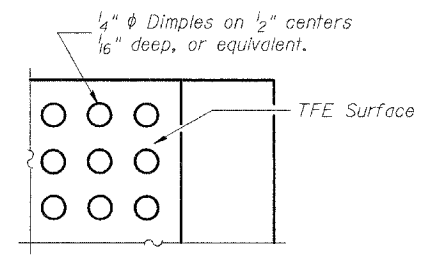
SECTION A-A



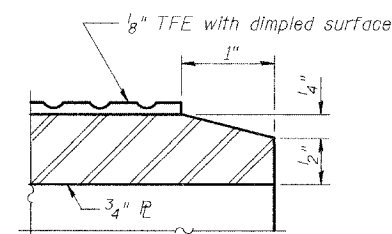
TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY



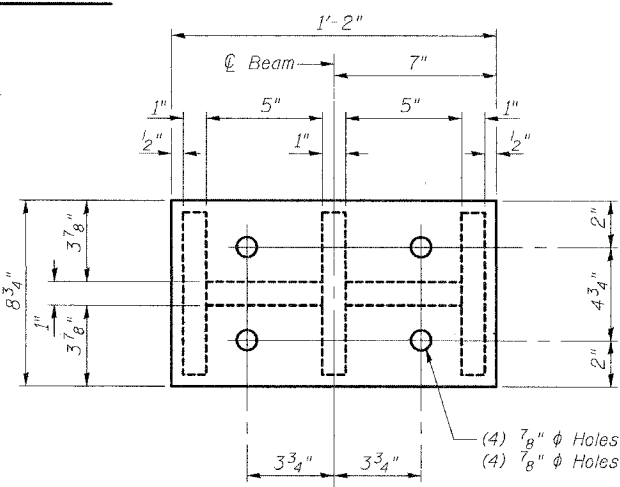
PLAN-TFE SURFACE



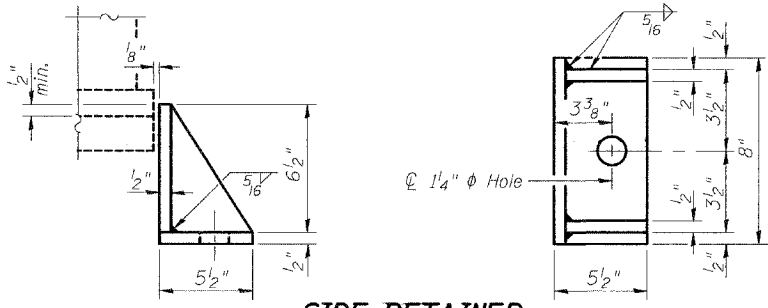
SECTION THRU TFE

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

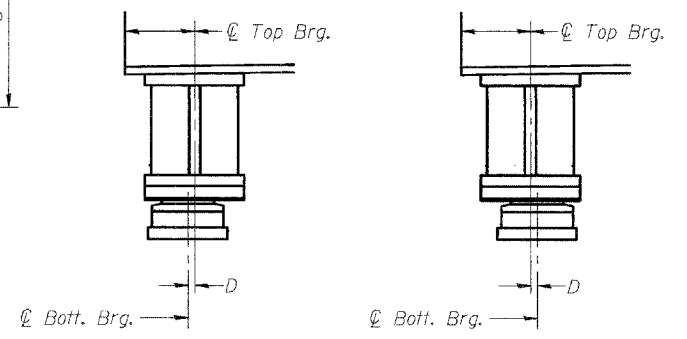


PLAN STEEL EXTENSION



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BELOW 50°F. (Move bott. brg. away from fixed brg.)
ABOVE 50°F. (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXPANSION BEARING

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

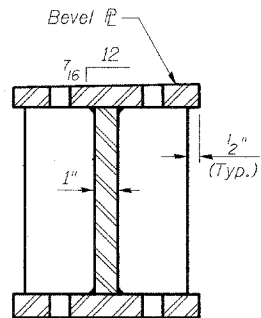
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	EACH	6

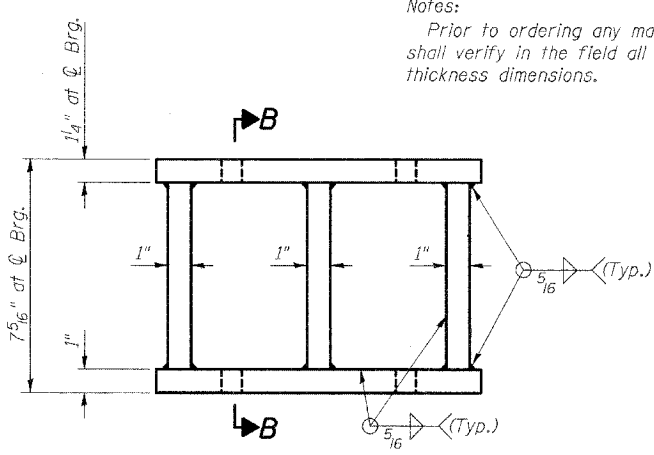
REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
					03/04

F.A.S. RTE. 1588 OVER MCKEE CREEK
SECTION 04-00185-00-BR
Project RS-1588 (106)
ADAMS COUNTY

TYPE II ELASTOMERIC BEARING
STRUCTURE NUMBER 001-3026
STATION 314+60.75



SECTION B-B



ELEVATION STEEL EXTENSION

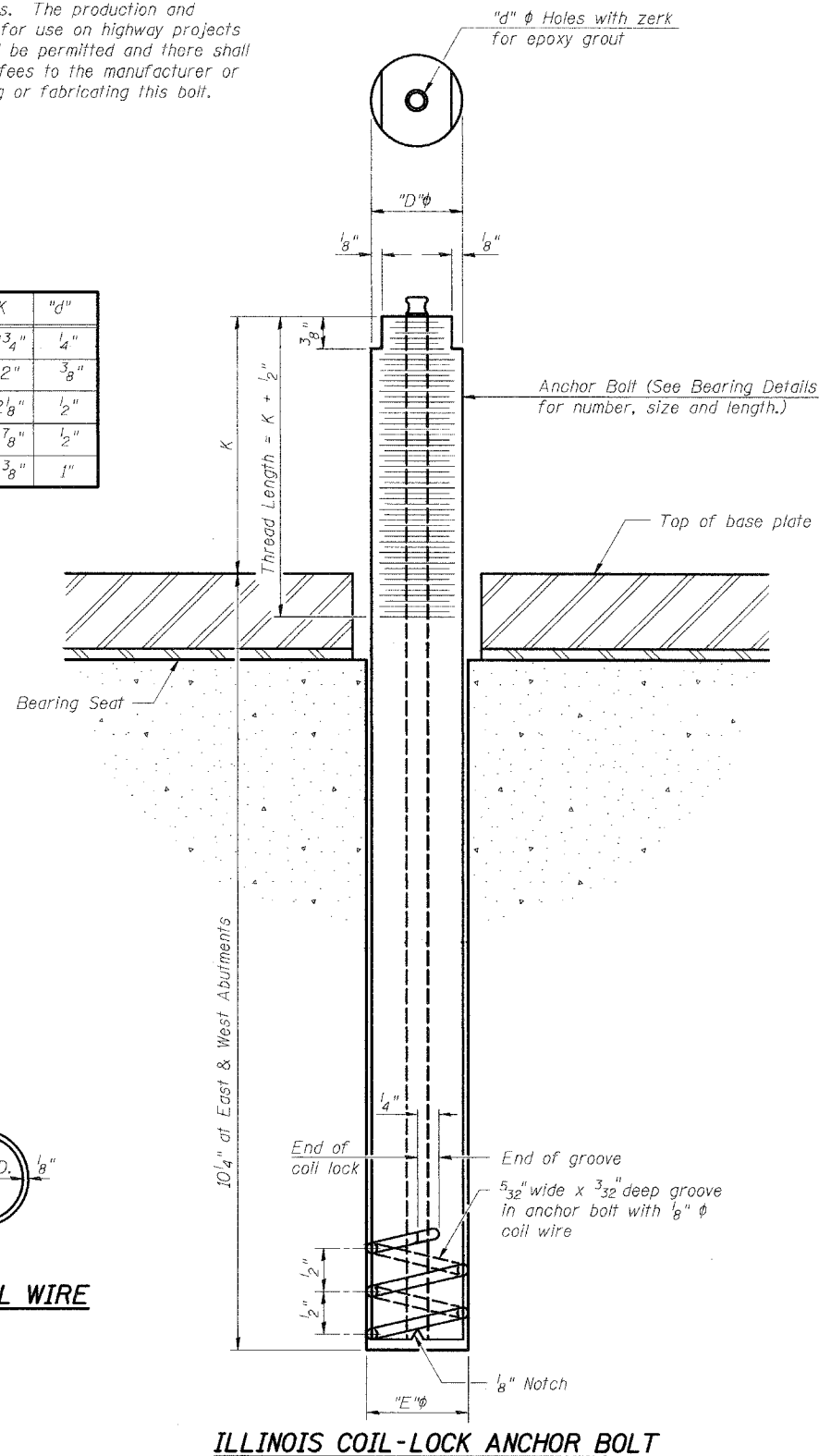
Notes:
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

4/14/2004 9:02:41 AM p:\04files\040025\Bridg Plans\021-3026-Bridge.dgn

ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	19
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		
* 04-00185-00-BR				

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/6"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

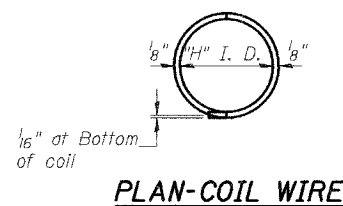
1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
 The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
W. Abut.	A307
E. Abut.	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.



PLAN-COIL WIRE

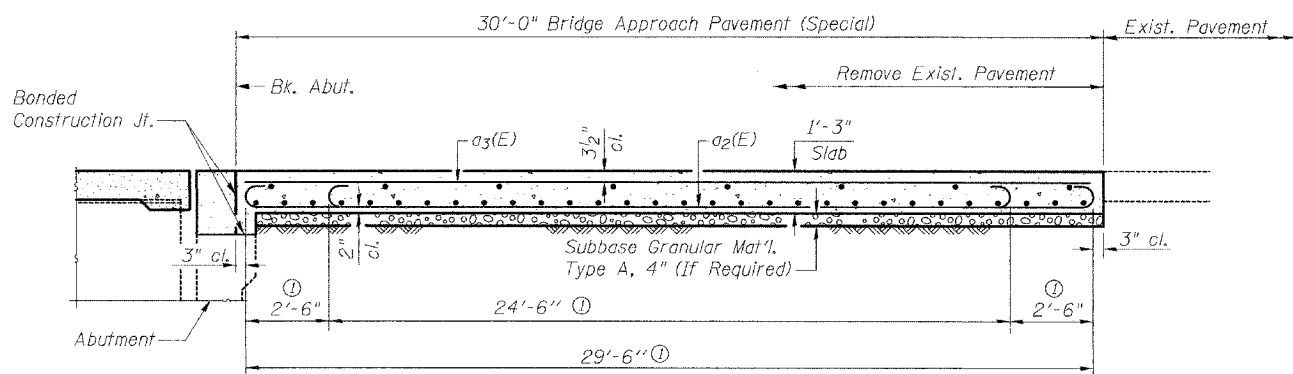
GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
 The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BGJ	WZM			03/04
F.A.S. RTE. 1588 OVER MCKEE CREEK SECTION 04-00185-00-BR Project RS-1588 (106) ADAMS COUNTY					
ANCHOR BOLT DETAILS FOR BEARINGS STRUCTURE NUMBER 001-3026 STATION 314+60.75					

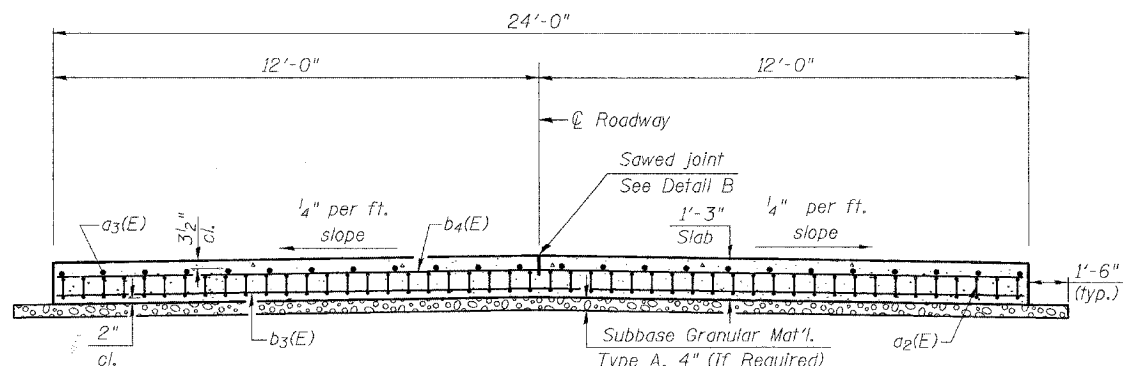
ROUTE NO.	SEC	COUNTY	TOTAL SHEETS	SHEET NO.
FAS RTE 1588	*	ADAMS	20	20
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

* 04-00185-00-BR



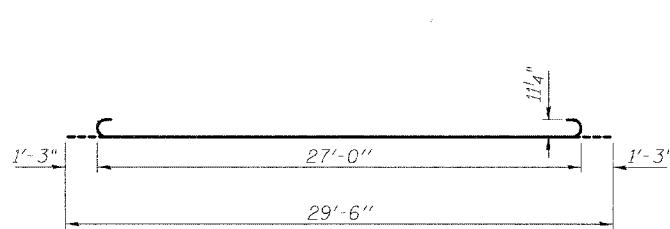
SECTION C-C

① Stagger a₂(E) bars as shown on plan - full width

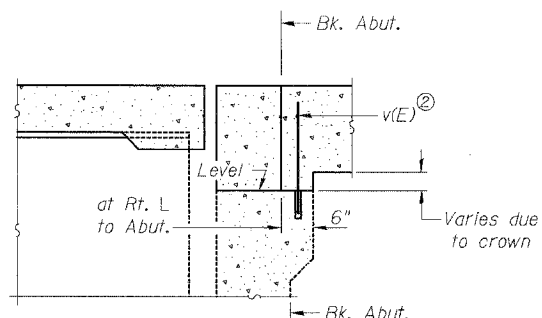


SECTION D-D

(See Plan for Dimensions not shown)

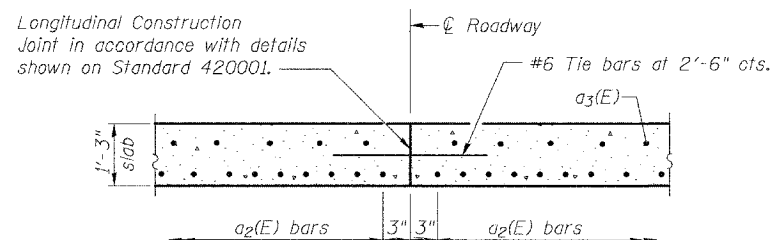


BAR a₂(E)



SECTION E-E

② v(E) bars are billed with the superstructure See Sheets #4 and #5 of 12.

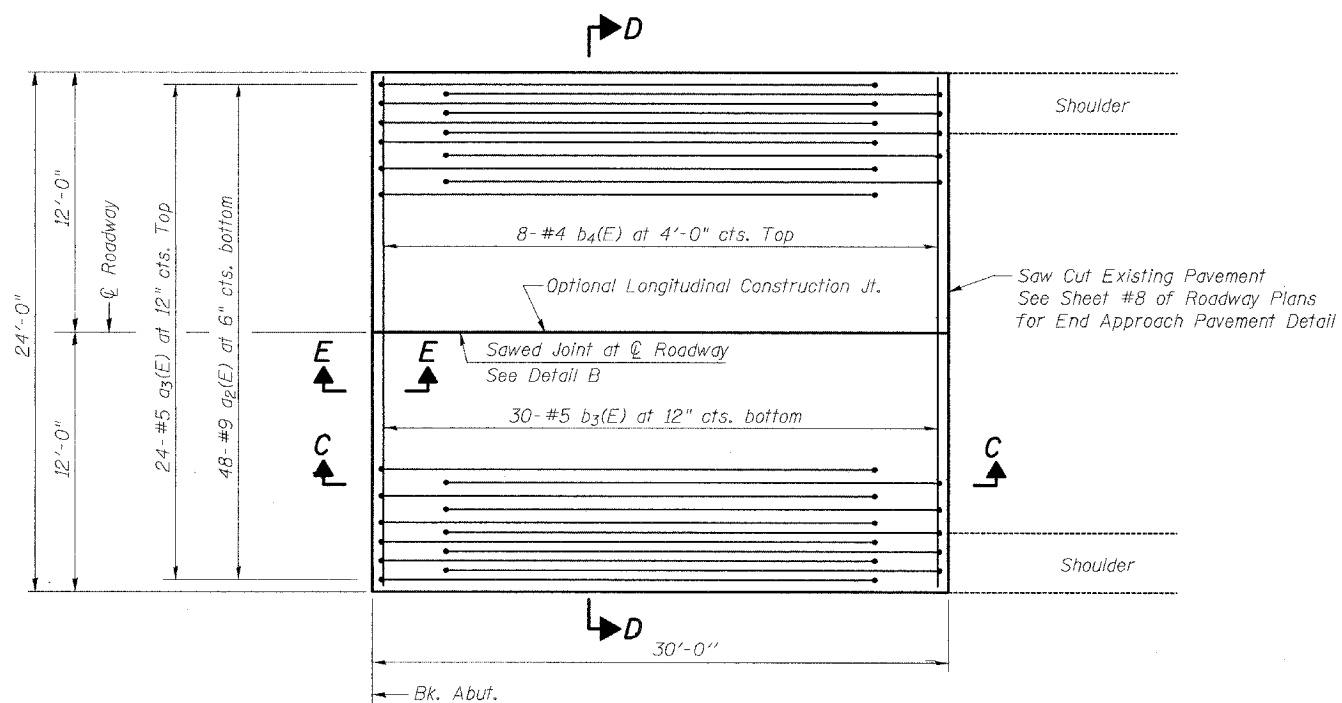


OPTIONAL LONGITUDINAL CONSTRUCTION JOINT

As approved by the Engineer, the Contractor may elect to reduce the width of pour by use of the Optional Longitudinal Construction Joint shown. Joints shall be located at centerline roadway.

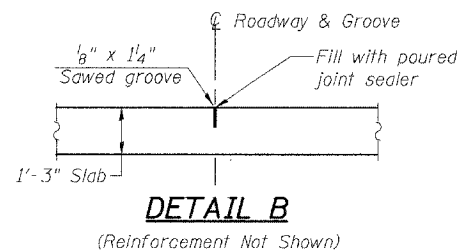
Notes:

Reinforcement bars designated (E) shall be epoxy coated. Cost of reinforcement bars, epoxy coated, concrete, sub-base granular material Type A, pavement removal, excavation to bottom of sub-base and optional longitudinal construction joint are included in the cost of "Bridge Approach Pavement (Special)". Provisions of Section 420 of Std. Specification shall apply.



PLAN

(East Bridge Approach Pavement shown, West Bridge Approach Pavement the same, except opposite hand)



DETAIL B

(Reinforcement Not Shown)

BRIDGE APPROACH PAVEMENT (SPECIAL)

BILL OF MATERIAL

(For one approach)

Bar	No.	Size	Length	Shape
a ₂ (E)	48	#9	29'-6"	U
a ₃ (E)	24	#5	29'-6"	—
b ₃ (E)	30	#5	23'-6"	—
b ₄ (E)	8	#4	23'-6"	—
Reinforcement Bars, Epoxy Coated			POUND	6,410

DESIGN STRESSES

f_y = 60,000 p.s.i.
f'c = 3,500 p.s.i.

REV. NO.	DRAWN	CHKD.	APPD.	DESCRIPTION	DATE
	BJG	WAW			03/04

F.A.S. RTE. 1588 OVER MCKEE CREEK
SECTION 04-00185-00-BR
Project RS-1588 (106)
ADAMS COUNTY

BRIDGE APPROACH PAVEMENT (SPECIAL)
STRUCTURE NUMBER 001-3026
STATION 314+60.75